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EDINBURGH MEDICAL AND SURGICAL JOURNAL:

EXHIBITING

A CONCISE VIEW

OF THE

LATEST AND MOST IMPORTANT DISCOVERIES

IN

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The following publications have been sent to us for review:

A Treatise on Inflammation of the Mucous Membrane of the Lungs; to which is prefixed, an Experimental Inquiry respecting the Contractile Power of the Blood-vessels, and the Nature of Inflammation. By Charles Hastings, M. D. Physician to the Worcester Infirmary. 8vo. pp. 420. London, 1820.

A Synopsis of the various kinds of difficult Parturition, with Practical Remarks on the Management of Labours. By Samuel Merriman, M. D. F. L. S. Lecturer on Midwifery. Third edition. pp. 323. With five Plates. 8vo, London, 1820.

An Elucidation and Extension of the Harringtonian System of Chemistry, explaining all the phenomena; without one single anomaly. By Robert Harrington, M. D., Author of "Fire and Planetary Life;" from which all the newest, important, nautical tables, have been taken.—Premium: Anxious to promote discussion and examination of my important system, I have lodged L. 100 in the hands of Messrs Stephenson, Rimington, and Company, Bankers, London, as a premium for a complete, fair, and full refutation of it. pp. 170. 8vo. London, 1819.

Letters to the President of the associated Apothecaries and Surgeon-Apothecaries of England and Wales, on the Present State of the Practice of Physic and Surgery. First Series. Intended to give a comparative view of particular systems of medical education; to consider the separation of medicine from surgery; to estimate the claims of the general practitioner; and to propose a more respectable mode of remunerating his attendance. 8vo. pp. 77. London, 1820.

Nouveau Journal de Medecine, redigé par MM. Beclard, Chomel, Hippolyte Cloquet, Jules Cloquet, Orfila, et Rostan.

Revue Medicale, Historique et Philosophique, par MM. Bally, Bellangen, F. Berard, Bertieu, Bousquet, Delpech, Desportes, Double, Dunal, Esquirol, Gasc, Giraudy, Jadioux, Laurent, Nicod, Prunelle, Rouzet, 1re anné 11e et 111e Livr.

ERRATA.

Page 1, line 22, and page 50, lines 1 and 6, *for* various *read* varicose.
413, line 41, *for* impressions *read* imperfections.
414, line 7, *for* flimsy *read* filmy.
415, line 29, *for* liver *read* laver.
416, line 36, *for* like spinage *read* like boiled spinage.

In p. 267 we should have mentioned that the beautiful skeletons of the birds and fishes, engraved by Mr Mitchell from drawings by Mr Greville, were prepared by Dr Willis, who has presented to the Museum of the University some specimens of his skill in that art, superior to any thing we have ever seen.

The sentence in Dr M'Keever's case of Ovarian Abscess, beginning in the sixth line of p. 369, should be altered as follows:

"On examination per vaginam, the os uteri was found to have a perfectly healthy feel; the uterus itself, as far, at least, as could be ascertained by such an examination, did not appear to be larger than in the unimpregnated state."

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The following publications have been sent to us for review.

Observations on the Use and Abuse of Mercurial Medicines, in various Diseases. By James Hamilton, jun. M. D. 8vo. Edinb. 1819.

A Sketch (*Analytical*) of the History and Cure of Contagious Fever. By Robert Jackson, M. D. 8vo. London, 1819.

Lectures on the Blood, and on the Anatomy, Physiology, and Surgical Pathology of the Vascular System of the Human Body, delivered before the Royal College of Surgeons of London, in the Summer of the year 1819. By James Wilson, F. R. S. 8vo. London, 1819.

Surgical Essays. By Astley Cooper, F. R. S. and Benjamin Travers, F.R.S. Part II. 8vo. London, 1819.

The Army Medical Officer's Manual upon Active Service; or Precepts for his Guidance in the various situations in which he may be placed; with Observations on the Preservation of the Health of Armies upon Foreign Service. By J. G. V. Millingen, M. D. 8vo. London, 1819.

Remarks on the Treatment of some of the most prevalent Varieties of Inflammation of the Eye; with Cases. By Thomas Whately. 8vo. London, 1819.

Report of the State of the Institution for the Cure and Prevention of Contagious Fever in Newcastle and Gateshead, for the 14th year, ending April 1819. 8vo. Newcastle, 1819.

Medical Topography of Upper Canada. By John Douglas, Assistant Surgeon, 8th Regiment. London, 1819.

Practical Illustrations of Typhus Fever, of the common Continued Fever, and of Inflammatory Diseases. By John Armstrong, M. D. Third edition. 8vo. London, 1819.

A Treatise on Aneurism, with numerous additions; and a Memoir on the Ligature of the Principal Arteries of the Extremities, with Engravings; translated from the Italian, with additional cases, and an Appendix. By John Henry Wishart. Second Edition. 8vo. Edinburgh, 1819.

Essay on two Mineral Springs, recently discovered at Harrogate, with Remarks on the Springs of Thorp, Arch, and Ilkey. By Adam Hunter, M. D. 8vo. London, 1819.

A Series of Engravings representing the Bones of the Human Skeleton, with the Skeleton of some of the Lower Animals. By Edward Mitchell, Engraver, Edinburgh; the Explanatory References by John Barclay, M. D. Lecturer on Anatomy. Parts I. and II. Imperial or Royal 4to. Edinb. 1819, 1820.

The veteran Dr Jackson, Inspector of Military Hospitals, author of several esteemed works on Fever and the diseases of the West Indies, has been ordered by Government to proceed to Cadiz, to investigate the nature of the fever now raging in that city.

Dr Somerville, Principal Inspector of Military Hospitals, has been appointed physician to Chelsea College, vice Dr Mosely, deceased, author of the work on Tropical Diseases, on Cow-Pox, and other interesting subjects.

A work is now in course of preparation, by John Hennen, M. D., F. R. S. E. Deputy Inspector of Military Hospitals, which will embrace the whole substance of his "Observations" published in 1818: With many additional cases and observations on the subject of Hospital Police and Arrangement; on Syphilis; on Small-Pox and Vaccination; on the detection of fictitious diseases, and other subjects of the first importance to Hospital Surgeons, both in Military and Civil Life; illustrated with numerous plans and drawings. It is supposed that this work will not extend beyond two moderate sized octavo volumes, and that it will be ready for publication early in the ensuing year.

THE

EDINBURGH

MEDICAL AND SURGICAL JOURNAL.

1. JANUARY 1820.

PART I.

ORIGINAL COMMUNICATIONS.

I.

RESEARCHES ON THE PATHOLOGY OF THE INTESTINAL CANAL.

PART I.

By JOHN ABERCROMBIE, M. D. Fellow of the Royal College of Surgeons of Edinburgh.

AFTER all that has been written on this subject, the pathology of the intestinal canal still presents an interesting field of investigation. When we consider the delicacy of its structure, its great extent, and the important functions which it has to perform, we expect to find its diseases numerous and dangerous, and in their nature often obscure and intricate. Externally it is a serous membrane, and liable to the diseases incident to that particular structure; internally it is a mucous membrane, and liable to the diseases of mucous membranes; and it is, besides, through its whole extent, a muscular organ, upon the healthy action of every part of which it constantly depends for the proper discharge of its functions. It is six times the length of the body to which it belongs, and connected with it there are the delicate organs concerned in digestion and absorption, which have diseases peculiar to themselves.

The acute diseases of the intestinal canal seem to arrange themselves under two heads. (1.) Diseases affecting it as a

muscular organ, or derangements of its peristaltic motion. (2.) Inflammatory diseases. Under the former division, we are led chiefly to the important subject of Ileus; under the latter, to a class of diseases, which, though they agree in the general characters of inflammation, vary remarkably according to the particular structure in which they are seated, the serous, the mucous, or the muscular coats. The organic diseases, and several chronic affections of the intestines, are so connected with one or other of these leading classes, that the consideration of them must be very much combined.

Part I.

Of Derangement of the Peristaltic Motion of the Intestinal Canal.

The peristaltic motion of the intestinal canal consists of a series of alternate contractions and dilatations, to which nothing analogous exists in any other part of the body. In regard to the various conditions of the muscles concerned in it, there are several circumstances that deserve particular attention.

When healthy intestine is empty, it seems to contract entirely, so as to assume the appearance of a solid cord, white and corrugated. Nearly the whole tract of intestine may occasionally be seen in this state in the bodies of infants, who before death had been much purged, or had been affected with diarrhœa without disease of the coats of the intestine. A portion of intestine, again, that has been the seat of inflammation and gangrene, though it may be empty, does not contract in this manner, but falls flat, presenting a broad surface like an empty bag. (See Case 4th.) The contraction, therefore, in the former case, is a muscular action which is lost in the latter; it is that property of muscles, by which they contract when nothing opposes their contraction. It has been called by physiologists the tonic power of muscles: it is not a mere shrinking by elasticity, but a muscular action of great power, as may be seen on the surface of the body, in the force with which muscles contract when their antagonists are paralysed.

When intestine is thus empty and contracted, it is probable that the muscular fibres are at rest; and the presence of some contents is probably required to bring into action the peristaltic motion. One portion of the canal then contracts upon the matter contained in it, propelling it forward into another which is thus distended, and then contracts in its turn, propelling the contents forward into a third portion, and so on. Now various actions take place in this process. When a portion of

intestine, which I shall call No. 1., propels its contents forward into a portion, No. 2., which is supposed to be empty, it must contract with such force as not only to propel the contents, but also to overcome the tonic contraction of No. 2. Again, when No. 2. contracts and propels the contents into another portion, No. 3., by what power are they prevented from returning backwards into No. 1.? It is probable, that though No. 1. and No. 3. are both in a state of contraction, they are nevertheless in a different condition, No. 3. being contracted merely by its tonic power, and No. 1. retaining, besides this, a degree of the actual force with which it had lately contracted in propelling the contents into No. 2., and being thus in a state less liable to be distended than No. 3. There are also circumstances which render it probable that relaxation to a certain extent takes place in the fibres of the lower part, while the peristaltic motion is going on in the healthy manner.* Thus in the healthy condition of the parts, the motion is propagated downwards, not perhaps in the simple manner which I here suppose, but in a manner sufficiently analogous to it, to answer the purpose of this illustration. In the actual condition of the function in a healthy body, a part does not probably empty itself at once, but by a succession of contractions, propelling forward its contents in small portions. There are other circumstances also by which the action is complicated, but they do not affect the case which I have given as an illustration, and which is perhaps precisely, or nearly that which occurs under the action of a purgative, and in certain diseases of the canal in which its action is morbidly increased.

Now this process is entirely a muscular action, and there are various circumstances by which it may be deranged. When the portion No. 1., for example, has contracted and propelled its contents into No. 2., if this does not contract in its turn, the matters will lodge in it as in an inanimate sac, and the process will be interrupted: the same will take place, if No. 2. does not contract with such power as to overcome the tonic contraction of No. 3. If No. 2., again, contracts with its regular power, while there exists some obstacle to the dilatation of No. 3., the contraction will dilate No. 1. instead of No. 3., and the action will be inverted. A remarkable example of this will be found in Case 19th, in which the action was propagated downwards, till it reached the extremity of the colon, where it was inverted by an organic cause impeding the dilatation, and thence regu-

* See Mr A. Cooper's account of the phenomena observed in a case of artificial anus. Treatise on Hernia, page 38.

larly propagated upwards till it terminated in a fit of vomiting, a certain proportion of the contents, however, being continued downwards, and discharged by the rectum in the natural way.

The causes, therefore, which may interrupt the peristaltic action, are principally referable to two heads. (1.) A part having its muscular power destroyed or weakened, so as to render it incapable of acting in unison with the other parts. (2.) A part being, from some cause, incapable of that degree of dilatation which is necessary for enabling it to propagate the action. Let us consider briefly each of these cases.

I. Suppose that the series of contractions and dilatations have gone on through successive portions of intestine, which I shall call Nos. 1, 2, 3, 4, and 5, and that No. 5. has its muscular power so diminished, as to be incapable of dilating No. 6.; an interruption will take place, and an accumulation of matter in No. 5. The healthy parts above are still acting, and propelling additional matter into No. 5., and if by this additional stimulus it shall be excited to contract with additional force, the interruption will be removed. If not, the healthy parts above will be excited by the interruption to increased contraction, and one of two consequences will probably follow. No. 5. being considered as an inanimate sac, by the increased impulse from above, the matters may be forcibly driven through it, so as to distend No. 6., and so continue the action, allowing No. 5. to contract and recover itself; or, if it fail in this, the increased impulse will only tend to increase the distention of No. 5. until it is distended beyond its power of contraction, or paralysed from over distention. Thus, I conceive, is formed a paroxysm of simple ileus, and the effects vary according to particular circumstances. From the part thus diseased, the action may be inverted and communicated upwards, or if the healthy parts above are loaded with contents, they may be thrown into still more violent action downwards. If this action should still fail in restoring the natural course of the function, the parts will be exhausted in their turn. The dilatation will extend to No. 4., and the parts above continuing to act, this also will be distended beyond its power of contraction, and so on. The appearances on dissection in fatal ileus correspond with these conjectures. The lower part of the canal is found empty, contracted, and healthy. This terminates abruptly at a certain point, and is succeeded by a portion distended to the greatest degree, loaded with feculent matter and flatus, in some cases quite thin and transparent, in others inflamed and gangrenous. From this portion, the distention is traced upwards, sometimes to the very commencement of the canal. The immense quantities of gas

which are found in the distended intestine in these cases, are probably separated from the stagnant matters contained in it, and, not being thrown off, must prove a powerful cause of distention.

II. Suppose the series of contractions and dilatations to be propagated downwards as before, and that, from some cause, No. 6 is rendered incapable of the same degree of dilatation as the other parts, though without being by any means actually obstructed.—The effect here will vary according to circumstances. From the state of the action in general, and the usual quantity of contents, it may happen that, in ordinary cases, no greater degree of dilatation is required than No. 6 is capable of transmitting, and the process will go on without interruption. But if, from an increased quantity of contents at a particular time, or an accidental accumulation of flatus, a greater degree of distention shall be communicated to No. 5 than No. 6 is capable of, then an interruption will take place in No. 5 in the same manner as in the former case,—and the parts above continuing to act, it will be in danger of being over distended. The interruption may be temporary,—may frequently take place, and be soon removed, until at length, from some cause which eludes our observation, it terminates in perfect ileus. This form of the disease is strikingly illustrated in Cases 9 and 10, in which it is to be particularly observed, that there was no mechanical obstruction. In such cases also, it is to be remarked, that a certain quantity of the contents may pass through, as occurred in Case 19, and probably in Case 9. In Cases 9 and 10, the cause was evidently of long standing. Cases 11 and 12 exhibit remarkable examples of the affection from causes of a more recent kind. This form of the disease may also arise from organic contractions of a mechanical nature, as in Cases 13 and 14, in which the contraction had gone on, producing *little* inconvenience, until it terminated at length in fatal ileus. This modification of the disease may also be fatal by gradual exhaustion, without perfect ileus, as in Cases 19 and 20.

In this manner, I conceive, is formed the paroxysm of ileus. The farther progress of the affection varies in different cases. After a certain period, the parts may recover their healthy relations, and the disease be removed,—or it may continue till an extensive portion has been paralysed by over distention, and the case probably becomes irremediable. There is reason to believe, that it may in this state be fatal, without farther disease; but the common progress of it is to inflammation and its consequences. We cannot explain this phenomenon; but we know, that all parts that are rapidly distended are liable to in-

flammation. We see it in the inflammation which attacks the distended urinary bladder, and the integuments covering certain tumours which have increased rapidly. We see the converse in the remarkable effect of collapse of the cornea in relieving inflammation of that organ.

The opinion which I have proposed in regard to the pathology of ileus, differs considerably from a doctrine which considers this disease as originating in spasm. According to this system, the parts which on dissection are found contracted, are supposed to be contracted by spasm, and, consequently, to be the primary seat of the disease. Many considerations induce me to doubt this hypothesis.

1. Though all muscular organs may be considered as liable to spasm, I think it very doubtful whether such fibres as those of the bowels are really affected by it in such a degree as to prove a cause of disease. Our knowledge of the pathology of such muscles must be derived chiefly from the urinary bladder, as this organ admits of a more correct knowledge of its condition under disease than any other internal muscular organ. Now, we are familiar with a state of the bladder in which it is distended beyond its power of contraction; but we have no reason to believe, that it is ever spasmodically contracted so as to resist distention. We talk of spasm of the stomach; but if the stomach were contracted by spasm, in the manner which this hypothesis supposes in regard to the intestines, its cavity would be so much diminished that very little could be received into it. But, instead of this, we find persons labouring under the affection which has received this name, swallowing hot water and other liquids in large quantities.

2. Spasm, even in powerful muscles, is generally of short continuance, and it is very uncommon to find it continuing for such a length of time as this hypothesis supposes. The only example, perhaps, is in trismus, in which very powerful muscles are concerned. It is certainly very doubtful whether such fibres as exist in the intestinal canal could contract with such force, and continue in powerful contraction for so long a time as would be required to constitute an attack of ileus.

3. A great extent of intestine, perhaps the lower half, may occasionally be found in this contracted state. It is not probable that such an extent should be at once contracted by this powerful spasm; and that the whole of this portion is not contracted by spasm, appears from the facility with which, in many cases, it admits of large quantities of fluid being thrown in by injection.

4. In fatal ileus, which has been going on for many days,

the contracted portion may be still found perfectly healthy, the morbid appearances, inflammation, adhesion, ulceration, and gangrene, being entirely confined to the distended portion.

5. That the distended part is really in a state of paralytic inaction, is probable, from the remarkable case (Case 12) in which the disease was seated so low, that the contracted part could be fully dilated by mechanical means, but without relieving the disease.

6. That spasmodic contraction is not the primary disease, is probable from many cases in which there is really no obstruction, but the bowels are freely moved at various periods of the complaint. (See Cases 1, 3, 8, and 9.)

From these considerations I am induced to believe that, in simple ileus, the proper seat of the disease is the distended portion,—that this portion has lost its power as a muscular organ, being distended beyond its power of contraction, and that the contracted part (which has probably been emptied by injections) is kept in that contracted and quiescent state by its tonic power, and the suspension of the action from above, by which, in the healthy condition of the parts, it would have been distended.

VARIETIES OF ILEUS.

It is probable that the morbid action at the commencement of an attack of ileus, is a derangement of the relation in muscular action, betwixt one part of the intestinal canal and another immediately adjoining, with which it ought to have acted in concert. When we endeavour to investigate the manner in which this derangement may take place, we find the disease appearing under three modifications.

1. Simple Ileus, without any organic affection.

2. Ileus, proceeding from an organic affection, but of such a nature that it acts by deranging the muscular action, without mechanical obstruction.

3. Ileus with mechanical obstruction.

Sect. I.—*Simple Ileus.*

Simple Ileus is to be viewed as the disease of a muscular organ, and originating in derangement of muscular action. The leading appearances which the fatal cases present to us are, one part of the intestinal canal empty and contracted, and another part highly distended. In attending farther to the phenomena of the disease, the following varieties deserve our attention.

I. The disease may be fatal in this state of over distention, without inflammation.

Case 1.—A man, aged 40, (a shoemaker,) had been for some time affected with slight symptoms which were referred to the liver. On the 25th of August 1814, he was seized with an attack resembling cholera, which, after some medicine that was given him, was speedily succeeded by the usual symptoms of Ileus. He had severe pain of the abdomen; urgent vomiting; and costiveness; his pulse was generally about 96, and at last rose to 120. The pain was at times increased by pressure, but not uniformly so. He was twice bled, and the other usual remedies were employed without avail. He died on the 30th. I saw him for the first time on the 30th, when he was moribund. His bowels had been freely moved by medicine on the 29th.

Dissection.—The lower part of the right lobe of the liver was unusually soft. The only other morbid appearance was a considerable part of the intestinal canal in a state of great distention, without inflammation.

This is perhaps an unusual termination of the disease in adults, but I believe infants are frequently cut off in this manner, by the mere interruption of the healthy action of the intestinal canal.

II. The disease may be fatal with recent inflammation, without gangrene, or any of its other consequences.

Case 2.—A woman, aged 20, (23d June 1813,) was affected with violent pain of the upper part of the abdomen and towards the left side, at times increased by pressure, and varying considerably in its degree of severity; frequent and violent vomiting; obstinate costiveness; belly tumid and tense; tongue white; pulse 76, and rather small. On the 16th she got wet during the flow of the catamenia, which ceased, but returned at night; pain about the umbilicus began on the 17th, and increased gradually; vomiting began on the 21st, with hiccup.

Blood-letting; blistering; various purgatives; injections; warm baths, &c. were employed by a physician of eminence.

24th. Incessant screaming from the violence of pain; every medicine vomited instantly; pulse 88, and rather small; frequent hiccup; pain increased on pressure; no stool.

25th. No stool; pain almost gone; every thing vomited; pulse very feeble.

26th. No stool; free from pain; vomiting continued, with hiccup. Died in the night.

Dissection.—The whole of the colon, and about 12 inches of the lower extremity of the ileum, were empty, contracted, of a white colour, and seemed perfectly healthy. The remainder of the small intestine was distended to the greatest degree, and appeared thin and transparent. It contained chiefly watery matter and air. On the surface of the distended part there was in several places considerable inflammation, especially at the lower part, near the contracted portion. These parts were of a vivid red colour, without any tendency to gangrene,

and without exudation. There was a small abscess in the left ovarium; the stomach, liver, &c. were healthy.

III. The disease may be fatal with extensive inflammation and gangrene.

Case 3.—A young man, aged 19, (17th October 1813,) was affected with violent pain round the umbilicus; incessant vomiting; abdomen hard, tense, and a little tumid; bowels obstinately costive; pulse 84; countenance depressed and anxious; had been ill six days, during which a variety of remedies had been employed without relief.

In this severe case, every variety of practice was employed in the most active manner; repeated general and topical bleeding; blistering; various purgatives and injections; tobacco injections; cold applications; cold injections; crude mercury, &c. &c.

18th. Pulse 120; no relief; belly tympanitic; some feculent discharge by injections; urgent vomiting, but not feculent.

19th. Pulse 112; symptoms rather abated; some feculent evacuations.

20th. Pulse 92 to 96; symptoms aggravated; belly much swelled; every thing vomited almost instantly; pain continued violent; some *evacuation* of watery matter.

21st. Pulse not to be felt at the wrist; in the humeral artery it was 80 and regular; violent pain; no stool; great depression. Died an hour after the visit.

Dissection.—The stomach was healthy. Almost immediately below it, the intestine was distended to the greatest degree, in some places quite thin and transparent; in others highly inflamed and gangrenous, bursting when handled; in other places firm, though perfectly black. This state of disease continued to the middle of the small intestine, where a portion 12 inches in length was empty, contracted, and in its appearance quite healthy. Below this the canal was again diseased as above, distended, inflamed, adhering, and gangrenous, until three inches from the termination of the ileum, when it became suddenly contracted, empty, and white; but this and the other contracted portion were perfectly pervious, easily dilated, and in their coats quite healthy. The colon was healthy and collapsed, except at the lower part, where it contained some consistent feces; the other viscera were sound. The diseased portion of intestine was chiefly distended by air. It contained in some places thin feculent matter, but in no great quantity, and no consistent feces could be found in any part of it.

Case 4.—A boy, aged 12, (26th October 1813,) was affected with violent pain of the belly, chiefly around the umbilicus, vomiting, and some degree of swelling of the belly; pulse 50, soft and regular. Had been ill two days, during which he had had no stool. Various remedies were employed without benefit. 27th. Pulse 120, pain increased, with tension of the belly and tenderness on pressure, had only vomited once. Blood-letting was used in the morning, and again at 3 P. M. after which the pulse fell to 112. The other usual means were em-

ployed without procuring any stool; the pain continued unabated; the pulse rose again to 120, and became extremely weak, with coldness of the body; and he died between seven and eight o'clock in the evening, having continued in violent pain until immediately before death. I did not see this case during the life of the patient. I was present at the examination of the body. *Dissection.*—The stomach was sound, the small intestine was a little distended and slightly inflamed, especially at the lower part, where it had contracted some adhesions. The whole right side of the colon was in a state of gangrene, especially the caput cæcum, which had burst and discharged into the cavity of the peritonæum a large quantity of fluid feces. The diseased parts appeared to have been much distended, and, after being emptied by the rupture, had not contracted, but had fallen flat, presenting a very broad surface like an empty bag. At the upper part of the ascending colon, this diseased part terminated at once in healthy intestine, white, collapsed and empty. This was the state of the remainder of the colon, except the sigmoid flexure, which, with the rectum, contained much consistent feces.

The causes of simple ileus are not well ascertained, and the operation of them is involved in considerable obscurity. It is probable, that they may be referred to two heads: 1. The presence of substances which oppose some resistance to the propelling power of the canal. 2. Causes which diminish the muscular power of a part of the canal itself. 1. The action of the former is illustrated by those cases in which ileus has been distinctly traced to the presence of a large biliary calculus, or other concretion in the intestine. Some of these cases have been fatal, and, on dissection, the usual appearances of ileus have been found above the seat of the concretion. In others, after violent symptoms of several days continuance, the extraneous body has been expelled with immediate and complete relief.* It is probable that masses of indurated feces, and indigested articles of food, may act in this way as a cause of the disease. One severe case which I am acquainted with, seemed to have been induced by a large quantity of nuts, which had collected into a mass in the bowels, and were at length discharged, with relief of all the symptoms. If one portion of the canal were in that state of dilatation which precedes its contraction, and this contraction were impeded by a cause of this kind lodging in the portion immediately below, while the healthy parts above were forcibly propelling new matters downwards, it is, I think, easy to conceive how the former part might be-

* See a Case by Mr Thomas, Med. Chir. Trans. Vol. VI. p. 98.

come over-distended, in the manner which I have conjectured to constitute ileus. 2. The causes of the second class are more obscure, and perhaps still more founded in conjecture. We know the uneasy feelings that are produced by an accumulation of gas moving slowly through the bowels, distending one part after another, in the affection which is called flatulent colic. The distended part in this case can often be felt externally, so as to be ascertained to be the seat of the pain; and it is sometimes so firm and tense, that I have more than once seen it mistaken for a mass of organic disease. In a short time, perhaps in a few hours, it is gone. Now, were a distending cause of this kind, in its progress through the canal, to arrive at a part, the muscular power of which had been impaired, it is, I think, easy to conceive how this part might be distended to a degree from which it could not contract,—the consequence, I imagine, would be an attack of ileus. That this is a real disease of muscular fibres of this kind, we know from the effect of distention of the bladder, and we know also, that when the fibres have been once weakened by such an attack, it is liable to occur again from a smaller degree of distention than that which originally induced it. On the same principle, a person who has suffered an attack of ileus is often for a considerable time liable to violent attacks of pain in the abdomen, upon any irregularity in his diet, or want of attention to his bowels. What are the causes that may weaken the muscular power of a part of the intestine in the manner which I here suppose, we know not with certainty; perhaps cold is one of them. All muscles are liable to the rheumatic inflammation, and we see that it not only diminishes their power, but, in many cases, produces perfect paralysis; and even without the rheumatic state, cold is capable of directly paralysing muscular fibre. Perhaps another of these causes is over-excitement. We see ileus supervene upon cholera, and upon diarrhœa which has been attended with much irritation, especially in old people. But, without speculating farther on this point, I think we have much reason to suppose, that many cases of ileus are connected with a certain predisposition in the state of the parts. In what a different manner these may be affected by the same cause, is strikingly illustrated by the two following cases. In the one, a mechanical cause of some continuance produced violent symptoms, which ceased whenever the cause was removed. In the other, a similar cause of short continuance was followed by ileus in its most violent form.

Case 5.—A gentleman, aged about fifty, was affected with pain of the abdomen, urgent vomiting, and obstinate costiveness; the ab-

domen was tumid and tense; the pulse natural. He had been in this state for three days, during which a variety of remedies had been employed without benefit. On examining the groin, I discovered a hernia the size of a pigeon's egg, which was soft, and not painful, and was reduced at the first touch. A laxative injection being then given, operated freely, and all his symptoms were relieved immediately.

Case 6.—A woman, aged about thirty, on 10th October 1814, was suddenly seized with umbilical hernia, which protruded to the size of an egg, and was accompanied by severe pain across the upper part of the abdomen. I saw her about two hours after the appearance of the hernia, and it was very easily reduced, but the pain of the abdomen continued, and various purgatives and purgative injections were given without benefit. Without detailing the particulars of the case, it is sufficient for my present purpose to state, that it turned out to be ileus in its most violent form, which resisted the most active treatment for six days, and then terminated favourably, by perseverance in the usual remedies.

In these two cases, the cause was the same, and a corresponding interruption took place in the muscular action of the intestine; but in the one, this was recovered from as soon as the cause was removed; while in the other, it is probable, that a part of the canal had been injured in its muscular action in the manner which I have already alluded to, as calculated to give rise to an attack of ileus.

There are various circumstances in the history of ileus which favour the opinion, that a portion of the intestine is for a time deprived of its muscular action, and reduced to the state of an inanimate canal. When the disease is beginning to give way, the first discharges are generally watery; and we frequently see fluid matter discharged of such an appearance as gives every reason to believe that it had come from the higher parts of the canal, and in such quantity as leads us to suppose that the bowels must be emptied. Yet after this, the patient who has been taking very little nourishment, and chiefly liquid, begins to discharge, and often continues for days to discharge, quantities of indurated feces that are almost incredible, and which must have been lodging from the commencement of the disease. This can only be accounted for by supposing, that a portion of the canal had been distended, and incapable of action; that there the hardened feces had lodged, while fluid matters were driven through by the action of the healthy parts above, but that the hardened matter was not discharged till this part itself had recovered its muscular power.

Another circumstance, which I think can only be explained on

the same principle, is, that there is a modification of the disease, in which there is no obstruction, but, by the usual purgatives, liquid stools can be procured through nearly the whole course of the disease. Recovery in these cases is sometimes accompanied by immense discharges of hardened feces, which must have been lodging from the commencement of the attack.

Case 7.—A lady, aged 35, (3d December 1813,) was affected with vomiting, and pain over the whole abdomen, which was rather tense and painful upon pressure. Pulse rather frequent. She was bled and blistered, and took laxative medicine, which operated freely, bringing off thin feces of a natural appearance. After another bleeding, on the following day, she became much exhausted, her features shrunk, her pulse feeble, and of extreme frequency; laxative medicine, which had been given again, brought off fluid feces. She now took wine in large quantities for three days, and, under this treatment, she gradually recovered from the state of exhaustion, and the pulse came down in frequency. An injection given on the 7th operated freely; and, on the 9th, she took castor oil, with which she began to discharge hardened feces in the most extraordinary masses, and in immense quantity. This discharge continued spontaneously for four or five days, and the whole quantity discharged was almost incredible. On the 15th she was well.

This modification of the disease may be fatal without obstruction.

Case 8.—A gentleman, aged about 40, (10th November 1812,) was seized with vomiting and pain of the left side of the abdomen, his pulse varying from 40 to 60; took purgative medicine, which operated fully; and on the 11th, the vomiting had subsided, but the pain continued severe, and was more general over the abdomen; pulse 70.—12th. A tympanitic swelling appeared on the left side of the abdomen, which, on the 13th, had extended also to the right side; violent pain continued; pulse natural. On the 13th, he took purgative medicine, which operated fully four or five times. On the 14th, he was free from pain, but the swelling had extended over the whole abdomen; pulse still natural. On the 15th, the pain returned with great violence, with vomiting, and frequent pulse. It continued violent through the day and night, and he died early on the morning of the 16th. The body was not examined; but, from a case considerably similar, which is related by Morgagni, I think it probable that the distended parts had run rapidly to gangrene.

Sect. II.—*Ileus, with Organic Disease of such a Nature that it acts by interrupting the Muscular Action of the Intestine, without Mechanical Obstruction.*

Case 9.—A gentleman, aged 24, had been, for several years, liable to violent attacks of pain in the abdomen, chiefly affecting the right side. The attacks usually continued a few hours, and were very un-

certain in their recurrence; sometimes they returned every evening for weeks together, and sometimes he was, for weeks or months, perfectly free from them. One of his longest intervals was ascribed to taking daily a small dose of Epsom salt. On the 11th of June 1818, he suffered one of these attacks, which came on in its usual manner, and affected him with violent pain across the lower part of the abdomen, which was drawn into balls; no vomiting; pulse 60; pain alleviated by lying on his belly across the edge of his bed. Was seen by an eminent practitioner, who gave him an opiate and a purgative with relief; bowels freely moved; 12th, was better, but felt weak; 13th, walked out, but at night the pain returned with violence; pulse 60; an opiate was given without relief. At four o'clock in the morning of 14th, pain continued unabated; pulse 108; was bled to ℥xii. and injections given, by which his bowels were moved freely, four times; at 9 was found pale, cold, and exhausted, and pulse scarcely to be felt; but there was still severe pain in the abdomen, which was a little tympanitic, but not tender to the touch. He died at two P. M. I saw him two hours before death.—*Dissection.*—The small intestine was greatly distended, and, on many places, especially on the ileum, there were inflamed portions, with effusion of coagulable lymph, and others of a dark colour, approaching to gangrene. The greatest inflammation was at the very extremity of the ileum. The right extremity of the colon was singularly turned upwards upon itself, towards the outside, so that the surface of the caput cæcum was in contact with the surface of the ascending colon, and a firm adhesion had taken place between them, about two inches in extent. The adhesion was very firm, and was evidently of long standing; the parts immediately concerned in it appeared to be a very little thickened; the colon and the caput cæcum were in other respects quite healthy, and without any vestige of inflammation; other viscera healthy.

Case 10.—A man, aged 63, had been affected with double inguinal hernia for 40 years, both of which were easily reducible, and he had been for many years liable to violent paroxysms of pain in the abdomen, during which the herniæ were generally "forced out." He suffered one of these attacks more severe, and longer continued than usual, in November 1812. It began with shivering and nausea, with pain in the abdomen, and continued with various remissions and aggravations. He had been able to walk out about a week before his death, but was never free from pain in his bowels. During this attack, the ruptures had protruded frequently, but he always reduced them with ease till the morning of the 29th, when he failed. They were, however, readily reduced by a gentleman who then saw him, but at night, when I saw him, they had again protruded. They were easily reduced, but protruded again almost immediately, though he was lying on his back. He had some vomiting, but not urgent; violent pain over the abdomen, which was tender and extremely hard; pulse 120, and irregular; features collapsed; bowels had been freely moved by injections. Died in three hours after the visit.

Dissection.—Both ruptures were completely reduced, and without any adhesion to the sacs. The sacs were considerably thickened; the mouths of them were large and free; the inner surface of the sac of the left side was inflamed and sloughy. The small intestine was, down to the middle of the ileum, greatly distended, and, in many places, inflamed and gangrenous. The disease stopped at the part of the ileum which had formed the hernia of the right side; the surfaces of this portion, which had been in contact in the hernia, had formed a firm adhesion to each other, about three inches in extent. At this place, the coats of the intestine were somewhat thickened, but so as to produce very little diminution of its area, and it was otherwise quite healthy.

Case 11.—A boy, aged eight, was affected with frequent vomiting and obstinate costiveness; his belly was swelled and tympanitic, but without much pain or tenderness; he was pale and emaciated; his pulse frequent and feeble; he had been ill for ten or twelve days. The complaint had begun with severe pain and diarrhœa; this was succeeded by costiveness, which, for seven or eight days, had resisted every remedy; for the last two days every medicine had been vomited; his exhausted state left little room for active practice, which indeed had been fully tried before; in two days more he died. *Dissection.*—The small intestine was distended to the greatest degree, down to a point in the ileum, where the following cause of the disease was discovered. Between two turns of intestine, there was a narrow band of adhesion, rather more than an inch in length. It was evidently of long standing, and, while the parts had remained contiguous, had produced no bad effect, but by some relative change of situation of the parts, another turn of intestine had insinuated itself between the two adhering portions. This portion, however, was healthy. The effect appeared to be, that the band of adhesion being thus put upon the stretch, the peristaltic motion had been interrupted. At the lower attachment of the adhesion, the intestine was drawn aside into "puckers," and precisely at this point the distention ceased, and the canal became white, empty, and collapsed. At this point, however, there was no obstruction, and the coats of the intestine were perfectly healthy, except a circumscribed redness on the inner surface, at the point corresponding with the attachment of the band of adhesion. On the distended intestine there was slight appearance of superficial inflammation, but it was of small extent, and appeared to be quite recent.

Case 12.—A man, aged 60, (23d April 1815,) was affected with vomiting; pain of the abdomen, which was swelled and tympanitic; obstinate costiveness; pulse 108, and soft; countenance pale and exhausted; pain not increased by pressure; had been ill a week, during which powerful remedies had been employed without benefit; had formerly had two attacks of the same kind, one of which continued a week. This man lived in great distress till the 28th, without any remarkable change in his symptoms. The swelling of the

abdomen increased gradually, until it resembled that of a woman at the most advanced period of pregnancy, yet to the last he could bear pressure upon every part of it. His pulse varied from 108 to 116 : his death was sudden ; he had been out of bed, and dressed the day before, and in the morning of the day on which he died he did not appear worse than usual. Every powerful remedy was employed, without the slightest benefit. *Dissection.*—On opening the abdomen, a viscus came into view, which appeared to be the stomach enlarged to three or four times its natural size. On a more accurate examination, this turned out to be the sigmoid flexure of the colon, in such a state of distention, that it rose up into the region of the stomach, and filled half the abdomen. The stomach was contracted and healthy. The small intestine was healthy at the upper part, lower down it became distended, and of a dark colour ; at the lower part it was very much distended, with some spots of gangrene. The colon was greatly distended ; in some places it was not less than five or six inches in diameter, and terminated in the distended sigmoid flexure already mentioned ; the rectum was healthy and collapsed ; the sigmoid flexure was of a dark livid colour, and contained air and thin feces. What appeared to be the cause of this affection remains to be mentioned. The enlarged sigmoid flexure was found to have taken a remarkable turn upon itself, so that what was naturally the right side of it lay to the left, in contact with the descending colon, and the left, or ascending part of it, lay on the right. The consequence of this was, that the rectum, as it descended from the former, passed down behind the lower, or first turn of the sigmoid flexure, where it first takes the turn from the descending colon ; also the rectum itself, at this part, received a twist as if half round. Exactly at the point where this twist was, the distention and dark colour of the intestine terminated abruptly, and it became white and collapsed. At this part, however, there was no mechanical obstruction, for the parts were pervious, and, except the twist, perfectly healthy ; and farther, it happened in this singular case, that I had an opportunity of ascertaining the state of them during life. On the 25th, three days before his death, having exhausted all the ordinary means, I was induced to examine the rectum with a large ivory-headed probang, and I found at a certain depth, (which was afterwards found to correspond with the point where the rectum was twisted,) a slight obstruction to the passage of the probang ; however, it passed up with little difficulty, and was withdrawn without any. A piece of the intestine of an animal tied at the end was carried up beyond this point, and then strongly distended by injecting water into it. In this distended state it was retained for some time, and then slowly withdrawn ; but no discharge followed it, though, as I have already mentioned, the distended part contained only air and fluid feces.

To this part of the subject are to be referred the well known cases of very small herniæ, which include only a small portion of one side of the intestine. I have seen several of these, and I

have a preparation from a fatal case, in which the strangulated portion is not above one-third of an inch in depth, and in diameter like the point of the little finger, the area of the intestine, except this little portion, being quite free. The symptoms and the morbid appearances were precisely similar to those in the cases already mentioned; the intestine above the hernia being greatly dilated and highly inflamed, with some portions gangrenous, and, below the hernia, empty, collapsed, and healthy.

The cases which I have described under this article appear to me to be of considerable importance, and to throw some light upon the pathology of ileus. The disease in all of them was distinctly referable to a cause which was obvious on dissection, and yet the cause was such as produced no mechanical obstruction. This was most remarkable in Cases 9 and 10, in which the cause was evidently of long standing, and in Case 12, in which there was an opportunity of fully dilating the contracted portion, three days before the death of the patient. In these cases, then, the seat of the disease must have been the distended portion. We have seen it existing without inflammation, and the only idea we can form in regard to the nature of the primary disease, I think, is a muscular organ distended beyond its power of contraction. The paroxysms which had often occurred in Cases 9 and 10 were also remarkable. It is probable that, while the intestinal contents were in small quantity, and the action extremely moderate, the diseased portion was able to act in concert in the natural and healthy manner, but that, when a certain greater degree of dilatation took place in the parts above, a corresponding dilatation could not be communicated downwards, and an interruption occurred which occasioned the paroxysms of pain. The over distention, in these cases, was after a certain time removed, until at last, from some cause which eludes observation, it took place in a greater degree, which was not recovered from, but, passing into inflammation, was fatal. In Case 11 it is worthy of observation, that the mere distention was fatal; the appearance of inflammation being so slight and recent, that it could not be considered as the cause of death.

Sect. III.—*Ileus, with Mechanical Obstruction.*

On this part of the subject, I shall do little more than relate a few remarkable examples; and they are referable to three heads, contraction of the intestinal canal,—intus-susceptio,—and internal hernia.

Case 13.—A man, aged 70, a tailor, had complained for several

weeks of a deep-seated pain, referable to a particular spot at the lower part of the abdomen; but it was not so severe as to prevent him from following his usual occupations. On 27th July 1815 he was seized with violent pain of the belly, vomiting, and costiveness; on 28th, belly became swelled, tender, and tympanitic; pulse natural; 30th, some feculent discharge was procured; pulse about 100. Died rather suddenly on 31st.

Dissection.—The whole of the small intestines, and the colon, were in a state of uniform distention, and of a dark colour. The distention stopped at the second turn of the sigmoid flexure, before it turns down to terminate in the rectum. Here the intestine was for about an inch and a half very much thickened in its coats, and its area was so diminished as scarcely to admit the point of the little finger. The inner surface of this portion was covered with red fungous excrescences, like granulations; much feculent matter was collected above this place. There was no adhesion in the other parts of the intestine, nor any appearance of active inflammation; but a dark leaden colour was nearly uniform over the whole of it.

Case 14.—A woman, aged 60, had complained for some time of frequent uneasiness in her bowels, with flatulent distention.—27th August 1817. Uneasiness increased; no stool for four days; but no violent symptoms. From this time, she resisted every remedy, but still without any violent symptoms; the belly became gradually more and more enlarged, but there was no fixed pain, only occasional griping; no fever; no tenderness, and little vomiting. She died on 4th September, having lain for the last three days in a state of extreme lowness, with coldness of the whole body. *Dissection.*—The whole tract of the intestinal canal was prodigiously distended, and there was, in several places, recent inflammation, with exudation of coagulable lymph. The disease extended to the rectum, about four inches from the anus, where the intestine was so contracted as scarcely to admit the point of a small finger. Behind this spot, there was a mass of diseased glands, and the contraction was occasioned by a firm flat substance, which was connected with this mass, and crossed the intestine in front. This being cut through, the intestine was set at liberty, and its coats were sound.

Case 15.—A woman, aged 22, (9th November 1818,) while sitting dressing her child, was suddenly seized with vomiting, and pain at the stomach; the pain soon after moved downwards, and fixed, with great severity, in the region of the head of the colon; the whole abdomen became painful and tender.—10th, Urgent vomiting, violent pain over the whole abdomen, with frequent paroxysms of aggravation which produced screaming; abdomen tender; pulse 120, very small and feeble; countenance extremely faint and exhausted. Died on the 13th, without any particular change in the symptoms.—*Dissection.*—Small intestine greatly distended, with a slight blush of redness in some places. About three inches from the lower extre-

mity of the ileum, there began an inversion of the intestine, to such an extent, that more than 18 inches of the ileum had passed into the cavity of the caput coli. The inverted parts were much diseased, inflamed, and gangrenous, and some portions were reduced to the state of a soft pulp. At the commencement of the inversion a portion was much thickened; the colon was healthy; there was some effusion in the abdomen.

Case 16.—A boy, aged two years and five months, (7th May 1812,) was seized with vomiting, pain of the lower part of the belly, and tenesmus, with which he passed small quantities of bloody mucus, and some pure blood. He was hot and restless, and his countenance was anxious and depressed; pulse very frequent; abdomen, to the touch, natural. On the 8th, while straining at stool, a tumour, of a dark bloody colour, protruded from the anus to the bulk of an egg. It was easily reduced; but, on examination by the finger *in ano*, was distinctly ascertained to be inverted intestine, and a probang being carried up, passed to a great depth by its side, without reaching the commencement of it. Various unsuccessful attempts were made to restore it to its natural situation. The child died on the morning of the 9th. *Dissection.*—A most remarkable inversion of the intestine was discovered, which began at the middle of the arch of the colon, and the parts concerned in it, including the remainder of the colon and a corresponding portion of the ileum, when freed from the inversion, measured 38 inches. The part that had protruded at the anus was the inverted caput coli. The inverted portion of colon was of a dark livid colour, very soft, and, in some places, thickened. The portion of ileum included within this was healthy; a portion of omentum was also included, besides a considerable extent of mesentery. The other intestines were slightly inflamed, and there was some serous effusion in the abdomen.

I have seen another case, exactly resembling this in its symptoms, and differing from it only in the extent of the inversion, which began at the lower part of the colon. The patient was a boy aged about four years, and he survived five or six days.

Case 17.—A girl, aged 17, (5th July 1818,) was seized with violent pain in the belly; vomiting; obstinate costiveness; pain increased by pressure; pulse frequent. Various remedies were tried without benefit; pain continued; belly enlarged. I saw her on the 9th; the belly was then enormously enlarged; very tense, and tender; no evacuation; pulse 140, and weak; features collapsed; died at night.—*Dissection.*—The small intestine was much distended and inflamed; and, in several places, had burst and had discharged much thin feculent matter into the cavity of the abdomen. At the root of the mesentery, on the right side, and on a line with the head of the colon, there was a mass of diseased glands, the size of a large egg. To this mass, the appendix vermiformis had contracted a very firm adhesion by its apex, and as it stretched across from the caput cæcum to

ployed without procuring any stool; the pain continued unabated; the pulse rose again to 120, and became extremely weak, with coldness of the body; and he died between seven and eight o'clock in the evening, having continued in violent pain until immediately before death. I did not see this case during the life of the patient. I was present at the examination of the body. *Dissection.*—The stomach was sound, the small intestine was a little distended and slightly inflamed, especially at the lower part, where it had contracted some adhesions. The whole right side of the colon was in a state of gangrene, especially the caput cæcum, which had burst and discharged into the cavity of the peritonæum a large quantity of fluid feces. The diseased parts appeared to have been much distended, and, after being emptied by the rupture, had not contracted, but had fallen flat, presenting a very broad surface like an empty bag. At the upper part of the ascending colon, this diseased part terminated at once in healthy intestine, white, collapsed and empty. This was the state of the remainder of the colon, except the sigmoid flexure, which, with the rectum, contained much consistent feces.

The causes of simple ileus are not well ascertained, and the operation of them is involved in considerable obscurity. It is probable, that they may be referred to two heads: 1. The presence of substances which oppose some resistance to the propelling power of the canal. 2. Causes which diminish the muscular power of a part of the canal itself. 1. The action of the former is illustrated by those cases in which ileus has been distinctly traced to the presence of a large biliary calculus, or other concretion in the intestine. Some of these cases have been fatal, and, on dissection, the usual appearances of ileus have been found above the seat of the concretion. In others, after violent symptoms of several days continuance, the extraneous body has been expelled with immediate and complete relief.* It is probable that masses of indurated feces, and indigested articles of food, may act in this way as a cause of the disease. One severe case which I am acquainted with, seemed to have been induced by a large quantity of nuts, which had collected into a mass in the bowels, and were at length discharged, with relief of all the symptoms. If one portion of the canal were in that state of dilatation which precedes its contraction, and this contraction were impeded by a cause of this kind lodging in the portion immediately below, while the healthy parts above were forcibly propelling new matters downwards, it is, I think, easy to conceive how the former part might be-

* See a Case by Mr Thomas, Med. Chir. Trans. Vol. VI. p. 98.

come over-distended, in the manner which I have conjectured to constitute ileus. 2. The causes of the second class are more obscure, and perhaps still more founded in conjecture. We know the uneasy feelings that are produced by an accumulation of gas moving slowly through the bowels, distending one part after another, in the affection which is called flatulent colic. The distended part in this case can often be felt externally, so as to be ascertained to be the seat of the pain; and it is sometimes so firm and tense, that I have more than once seen it mistaken for a mass of organic disease. In a short time, perhaps in a few hours, it is gone. Now, were a distending cause of this kind, in its progress through the canal, to arrive at a part, the muscular power of which had been impaired, it is, I think, easy to conceive how this part might be distended to a degree from which it could not contract,—the consequence, I imagine, would be an attack of ileus. That this is a real disease of muscular fibres of this kind, we know from the effect of distention of the bladder, and we know also, that when the fibres have been once weakened by such an attack, it is liable to occur again from a smaller degree of distention than that which originally induced it. On the same principle, a person who has suffered an attack of ileus is often for a considerable time liable to violent attacks of pain in the abdomen, upon any irregularity in his diet, or want of attention to his bowels. What are the causes that may weaken the muscular power of a part of the intestine in the manner which I here suppose, we know not with certainty; perhaps cold is one of them. All muscles are liable to the rheumatic inflammation, and we see that it not only diminishes their power, but, in many cases, produces perfect paralysis; and even without the rheumatic state, cold is capable of directly paralysing muscular fibre. Perhaps another of these causes is over-excitement. We see ileus supervene upon cholera, and upon diarrhœa which has been attended with much irritation, especially in old people. But, without speculating farther on this point, I think we have much reason to suppose, that many cases of ileus are connected with a certain predisposition in the state of the parts. In what a different manner these may be affected by the same cause, is strikingly illustrated by the two following cases. In the one, a mechanical cause of some continuance produced violent symptoms, which ceased whenever the cause was removed. In the other, a similar cause of short continuance was followed by ileus in its most violent form.

Case 5.—A gentleman, aged about fifty, was affected with pain of the abdomen, urgent vomiting, and obstinate costiveness; the ab-

domen was tumid and tense; the pulse natural. He had been in this state for three days, during which a variety of remedies had been employed without benefit. On examining the groin, I discovered a hernia the size of a pigeon's egg, which was soft, and not painful, and was reduced at the first touch. A laxative injection being then given, operated freely, and all his symptoms were relieved immediately.

Case 6.—A woman, aged about thirty, on 10th October 1814, was suddenly seized with umbilical hernia, which protruded to the size of an egg, and was accompanied by severe pain across the upper part of the abdomen. I saw her about two hours after the appearance of the hernia, and it was very easily reduced, but the pain of the abdomen continued, and various purgatives and purgative injections were given without benefit. Without detailing the particulars of the case, it is sufficient for my present purpose to state, that it turned out to be ileus in its most violent form, which resisted the most active treatment for six days, and then terminated favourably, by perseverance in the usual remedies.

In these two cases, the cause was the same, and a corresponding interruption took place in the muscular action of the intestine; but in the one, this was recovered from as soon as the cause was removed; while in the other, it is probable, that a part of the canal had been injured in its muscular action in the manner which I have already alluded to, as calculated to give rise to an attack of ileus.

There are various circumstances in the history of ileus which favour the opinion, that a portion of the intestine is for a time deprived of its muscular action, and reduced to the state of an inanimate canal. When the disease is beginning to give way, the first discharges are generally watery; and we frequently see fluid matter discharged of such an appearance as gives every reason to believe that it had come from the higher parts of the canal, and in such quantity as leads us to suppose that the bowels must be emptied. Yet after this, the patient who has been taking very little nourishment, and chiefly liquid, begins to discharge, and often continues for days to discharge, quantities of indurated feces that are almost incredible, and which must have been lodging from the commencement of the disease. This can only be accounted for by supposing, that a portion of the canal had been distended, and incapable of action; that there the hardened feces had lodged, while fluid matters were driven through by the action of the healthy parts above, but that the hardened matter was not discharged till this part itself had recovered its muscular power.

Another circumstance, which I think can only be explained on

the same principle, is, that there is a modification of the disease, in which there is no obstruction, but, by the usual purgatives, liquid stools can be procured through nearly the whole course of the disease. Recovery in these cases is sometimes accompanied by immense discharges of hardened feces, which must have been lodging from the commencement of the attack.

Case 7.—A lady, aged 35, (3d December 1813,) was affected with vomiting, and pain over the whole abdomen, which was rather tense and painful upon pressure. Pulse rather frequent. She was bled and blistered, and took laxative medicine, which operated freely, bringing off thin feces of a natural appearance. After another bleeding, on the following day, she became much exhausted, her features shrunk, her pulse feeble, and of extreme frequency; laxative medicine, which had been given again, brought off fluid feces. She now took wine in large quantities for three days, and, under this treatment, she gradually recovered from the state of exhaustion, and the pulse came down in frequency. An injection given on the 7th operated freely; and, on the 9th, she took castor oil, with which she began to discharge hardened feces in the most extraordinary masses, and in immense quantity. This discharge continued spontaneously for four or five days, and the whole quantity discharged was almost incredible. On the 15th she was well.

This modification of the disease may be fatal without obstruction.

Case 8.—A gentleman, aged about 40, (10th November 1812,) was seized with vomiting and pain of the left side of the abdomen, his pulse varying from 40 to 60; took purgative medicine, which operated fully; and on the 11th, the vomiting had subsided, but the pain continued severe, and was more general over the abdomen; pulse 70.—12th. A tympanitic swelling appeared on the left side of the abdomen, which, on the 13th, had extended also to the right side; violent pain continued; pulse natural. On the 13th, he took purgative medicine, which operated fully four or five times. On the 14th, he was free from pain, but the swelling had extended over the whole abdomen; pulse still natural. On the 15th, the pain returned with great violence, with vomiting, and frequent pulse. It continued violent through the day and night, and he died early on the morning of the 16th. The body was not examined; but, from a case considerably similar, which is related by Morgagni, I think it probable that the distended parts had run rapidly to gangrene.

Sect. II.—*Ileus, with Organic Disease of such a Nature that it acts by interrupting the Muscular Action of the Intestine, without Mechanical Obstruction.*

Case 9.—A gentleman, aged 24, had been, for several years, liable to violent attacks of pain in the abdomen, chiefly affecting the right side. The attacks usually continued a few hours, and were very un-

healthy part of the canal above the seat of the disease; and the important question, in regard to this portion, is, Whether, in every case, it requires to be excited; or whether there are not modifications of the disease in which its action is already as great as can be desirable, and even some, in which it might be moderated with advantage? The violent tormina occurring in paroxysms, which we observe in many cases of ileus, certainly give reason to believe, that there is not any deficiency of action in the higher intestines, but rather a violent action, resembling that which is produced by a purgative,—a strong though ineffectual effort to overcome some interruption to the healthy action of the canal. Now, if a part of the canal be really in a state of inaction from over-distention, and if the action of the healthy part above fails in relieving it in the manner which I have already supposed, may we not conceive a case in which it is actually increasing it,—in which, by propelling new matter into the distended part, it is presenting an obstacle to this part recovering its healthy action. In such a case, might not benefit be obtained from allaying the action of the upper part, instead of increasing it? I think there are circumstances in the history of ileus which give some probability to this conjecture. Several of the remedies which are beneficial, are such as are calculated to allay muscular action; among these may be reckoned blood-letting, cold applications, and tobacco injection; and I have seen a severe case of ileus yield in a few hours after the use of a full dose of opium, which had for several days resisted the most active remedies. I by no means intend to say, that this principle is applicable to every case, but, from the whole phenomena of ileus, I do suspect that there are most important differences in the circumstances of the disease in different cases; particularly that there are some cases in which the upper part of the canal requires to be excited; others in which its action is already sufficient for every purpose that it can be supposed to answer; and some in which it may even require to be moderated. I think there is also some reason to suppose, that, in the cases which require the use of purgatives, there are important differences in the degree of excitement that is adapted to each,—that in some, the most active medicines are requisite, while in others, the mildest in very moderate doses, produce that beneficial action, which, by a stronger excitement, would be defeated. These remarks are not entirely hypothetical. The most accurate observers have often been heard to remark, that there are facts in the history of ileus which seem to be totally at variance with our ordinary ideas in regard to the action of purgatives,—that very mild medicines seem, in

many cases, to answer better than the more active,—and that the beneficial result sometimes follows the very mildest in very small doses, after the most powerful in immense quantities have been given in vain. I am aware of a source of fallacy which is inseparable from such observations, but I conceive they are by no means to be disregarded; and when we add to them the fact, that a full dose of opium is sometimes followed by the result which we have sought for in vain from the most powerful purgatives, I submit, whether the whole phenomena of the disease do not give considerable probability to the principles which I have proposed. In regard to the use of purgatives, I suspect, that the best practice in general is to give mild medicines in moderate doses, repeated at very short intervals, while, at the same time, we keep in view, that the use of purgatives is but a part of the treatment, and that the main object is to remove, if possible, that condition of the canal, as a muscular organ, by which purgatives are prevented from producing their usual effects. Every one, indeed, must have experienced, that, in regard to the use of purgatives, there is a point in the treatment of *ileus* when he is often brought completely to a stand, when he is convinced that it is in vain to urge them farther, and is led to look around for remedies calculated to act upon some other principle. Important remedies of this kind are bloodletting, blistering, and the effectual application of cold, either externally, or by glyster; but, as far as my observation extends, the remedy of most general utility is the tobacco injection. It should be begun with caution; perhaps for an adult in the quantity of 15 or 20 grains infused in four or six ounces of hot water. After the interval of an hour or two, it may be repeated in a quantity a little larger, until such effects are produced by it, viz. slight giddiness and muscular relaxation, as shew that it is exerting its proper effect upon the system. It may then be repeated at proper intervals a great many times, if the case do not yield. With these precautions I have given it in states of great nausea and exhaustion, with the effect of diminishing instead of increasing them, and, in one case, to a child three years of age, with the happiest result. In one of the most severe and obstinate cases I have had occasion to treat, it was repeated nearly twenty times with various partial effects, and at length with complete success. The obvious effect of this remedy upon the system, is to produce relaxation of all muscular parts, and the mode of its operation in ileus is involved in considerable obscurity. I have supposed, that, in this disease, the upper part of the canal is healthy, sometimes in strong action,—that a part below this is inactive from distention,—and that the lower part

is healthy and contracted, being kept in that contracted state by its tonic power, and the suspension of the action by which, in the healthy state of the parts, it would have been distended. A certain force is, indeed, acting upon it by the propulsion of matters from the upper part, but this acts with little effect after being communicated through the intermediate portion, which is in the state of an inanimate canal. It is, therefore, unable to overcome the tonic contraction of the lower part, which thus opposes an obstacle to the parts recovering their healthy relations. The same observation applies, if we suppose, that the distended part itself retains some degree of action, though feeble and imperfect. Now, in this state of the parts, could the tonic power of the lower part be for a time considerably diminished, it might perhaps be brought, as it were, more into unison with the other parts,—might be dilated in the natural manner by the weakened force which is acting upon it,—and the parts might thus be enabled to recover their healthy relations. Is this the action of the tobacco injection?—It is mere conjecture, and I urge it no farther. I add the following case, illustrating the effect of this remedy in a state which seemed to be nearly hopeless, and exemplifying an important fact to which I have already alluded,—that symptoms resembling those of gangrene may be recovered from

Case 21.—A woman, aged 20, (17th November 1813,) was affected with violent pain in the right side of the abdomen, and obstinate costiveness; pulse natural; had been ill three days; used purgative medicine and injections with some relief.

18th.—Pulse 96; urgent vomiting; pain of abdomen violent; was bled and blistered, and purging injections repeated.

19th.—Pulse 120; no stool; no relief; pain violent over the whole abdomen; urgent vomiting. Was bled again; various medicines given without effect; every thing was vomited. Towards the afternoon, the pain nearly ceased, with collapse of the features, and coldness of the surface; pulse 140, and very weak; vomiting continued; appeared to be moribund. Wine was now given, about a glass every hour. After a few hours, her appearance being improved, the tobacco injection was given at first in small quantity, and it was repeated several times. It did not increase the sinking, but seemed rather to abate both it and the vomiting; wine continued.

20th.—Pulse improved; some scanty evacuations; tobacco injection given several times with partial effect; vomiting abated; some Epsom salt was retained, and operated; free from pain; pulse 96.

21st and 22d.—Continued to improve; pulse 80; bowels kept open by small doses of Epsom salt. From this time continued well.

I have already alluded to the effects of blood-letting, and the application of cold. In the state of collapse produced by a full

bleeding, I have repeatedly seen the disease give way so suddenly, that there was no time to raise the patient out of bed. If there are symptoms indicating inflammation, this remedy of course must be urged in the most decided manner. In regard to the remarkable effects of cold, I refer to a valuable paper by Mr Smith of Kingussie, in the 9th Volume of this Journal, page 287. Of the other remedies that have been proposed, I have had little experience. Crude mercury in doses of lb. i. or more I have tried in several cases. In some of them, it appeared to abate the vomiting. I have not observed any other effect from it, and I am not convinced that the principle on which it is given is correct. In the Memoirs of the Medical Society of London, Vol. II. some remarkable cases are described, in which the forcible injection of fluid to the extent of six or eight pounds, was used with advantage.

Whatever practice is employed ought to be zealously persevered in, notwithstanding the most unfavourable appearances; for the disease has been known to resist for a long time the most active remedies, and yet terminate favourably, as late as the 17th day.

II.

On the Substitutes that may be used for the Cinchona. By James Thomson, M. D. &c.

I remember reading in a foreign medical journal, some years ago, a suggestion that coffee, from its peculiar properties, might be found useful in the cure of intermittent diseases; and, if my memory serves me correctly, many cases were mentioned as having been cured by means of it. Although the particulars of the reference have escaped me, yet I have since had opportunities of confirming the truth of the observation, and have taken the liberty of presenting them to you along with other remarks on intermittent fevers. "Specifics," says Pinel, "have always retarded the progress of medicine, and particularly of that kind so beautifully illustrated by Hippocrates, the medicine of observation or expectation; for the disease is no sooner named than the antidote suggests itself; the physician conceives no farther investigation is necessary; and the disease is put a stop to without one additional observation being recorded." Any one

must be aware how applicable this has been in regard to intermittent diseases; for the word fever is no sooner mentioned than bark is thought of, and that administered with no sparing hand, without considering that the fever may arise from deranged organic structure, suppressed catamenia, and the like; and then our efforts will only tend to strengthen the disease. When we add to this the shameful adulteration of the bark, which the avaricious disposition of mercantile men in general leads them to adopt, we need not be astonished at the complaints of want of success. We in truth become the executioner of our patient, whose strength of constitution has enabled him to obtain an intermission of the fever.

Our medical *creed* orders us to lose not a moment in *throwing in* the bark. But what kind of bark? Why a composition of the grossest materials, of which not one half is made of what it professes to be. This I have repeatedly ascertained from examining parcels sent to this island, and I have no doubt that the same imposition will be found at home. Who is there that will deny that, in administering such stuff to the weak stomach of an exhausted patient, we exhibit a mortal poison? No wonder we are told that the bark was rejected; yet such practices have prevailed, and do now prevail, and at this moment constitute the mode of relief adopted by the majority of the medical profession.

From a natural aversion to Peruvian bark, I was led to seek assistance from some other remedies. The first that suggested itself was coffee. I first ascertained its effects on the body when in health. * An ounce of dried ground unroasted coffee was infused in a pound of water, and boiled down to four ounces. One ounce was taken in a cold state every quarter of an hour. At the end of the hour the pulse had increased six beats, and continued so for some time. Experiments were afterwards repeated on the decoction, infusion, powder, and extract, with various results; yet the pulse never failed to be excited in some degree or other. The sensation that was felt after these trials was a sense of fulness of rather a pleasant nature, which continued

* I had, by repeated experiments, made some years ago, ascertained the natural state of my pulse, from observations made three times daily for upwards of a month. The pulse was always from four to six beats fewer in the evening. This will be found to be general. After a residence of three years in this island I find my pulse in health beats two pulsations more in the morning; this may be accidental. These experiments were made at Edinburgh in 1813-14, in conjunction with my learned friend Dr Knox, and inserted in your Journal, and published in an improved form as an inaugural dissertation, 1814, by that gentleman.

occasionally for an hour or so. Satisfied with these results, I waited an opportunity of putting them in execution on some diseased subject: I little imagined I should be the subject myself.

Case I.—I was seized, in consequence of exposure to a very unhealthy atmosphere, with a regular tertian fever. I took some purgative, and allowed the disease to go on for fourteen days without any farther medicine, for the very smell of bark was like to excite vomiting. During the intervals of the fever, I took the decoction of coffee prepared as above, an ounce three times daily. By the time the next paroxysm was to be expected, I had taken six ounces of powdered coffee made into decoction. The fit came on as usual, but was quite trifling. I continued the medicine for a week longer, and the fever never returned. I continued in good health for six months, and towards the fall of the year, from my professional duties leading me to be exposed at an unseasonable time, I again got back my old companion. I immediately took the coffee decoction, and had only three attacks of the disease.

Case II.—A young gentleman, lately come to the island, was attacked with intermittent fever, which he imprudently allowed to go on for six weeks. He applied to me. I gave the coffee decoction prepared by myself, but so disguised, that he could not detect it. I told him it was a particular preparation of bark. The stated quantities were faithfully given, and after using it six days, the fever left him. I then informed him of what he had taken, and he expressed himself much satisfied with the medicine having been so palatable.

Case III.—A negro woman had been subject to intermittent fever for six months. She was a sensible woman, and attributed her complaints to the situation of her house. She was quite regular, and had children. She had used bark and snake-root, but the fever still remained. The extract of the coffee, along with a scruple of the powder, was given for ten days, and the quantity faithfully administered. She expressed herself much relieved, and the fever ceased to trouble her, and the remedy was continued for three months.

I could mention four additional cases, treated in the same manner, but they afford merely a confirmation of what has been stated, with regard to the different preparations of the coffee. I should suppose the taste of the patient would guide us. Perhaps, that one which is sold under the name of the essence of coffee would prove very beneficial.

The next substance that I employed as a substitute for bark was the *lignum quassiæ*, a plant already well known in England. From the nature of the wood, it is impossible, without great labour, to reduce it to a fine powder. A watery infusion is the common mode in which it is given.

The bitter is very pure, but by no means unpleasant. In cases of intermittent fever, it has been used with complete success. I have several times given it, finely rasped, to the extent of several drachms in the day, and never found it to irritate the stomach, but its most beneficial effects are shown when it is given during continued fever. It is a practice adopted by many medical men in this island, and their success speaks highly in its favour. We are told to stop the bark the moment fever appears, but, to make up for the lost time, to throw it in freely during the intermission. This caution may be proper when we use bark alone, but there is no occasion to attend to it when the bitter infusions are trusted to. I have often given the bitter infusion, combined with snake-root, during hot fever, having previously well evacuated the bowels, and never found reason to alter the practice. On the contrary, the patients, many of whom had previous fevers, expressed great satisfaction at the present mode of treatment, when compared with that they formerly underwent in using bark. In no instance were the symptoms in the least aggravated, nor did irritation of the stomach come on; a symptom which, in the fevers of this country, baffles all our best directed endeavours, and which I am confident is often brought on by giving the bark improperly.

I could adduce the testimony of many most respectable medical gentlemen, in support of the above mode of practice, and in whose opinion, formed from long experience, the bark has lost much of its original character. When we consider the high price of bark, and how much we are exposed to the dishonourable dealings of the retailer, we should be anxious to grasp at every circumstance which holds out the smallest hope of bettering the condition of our suffering fellow-creatures, by combining the different plants possessing the bitter principle in its greater purity. By attending more minutely to the mode of practice adopted by the ancients in these complaints, before the introduction of cinchona, we will greatly advance our knowledge of intermitting diseases. Occasionally we meet with cases where the whole host of febrifuge remedies is unable to dislodge the enemy. Month after month elapses. The disease is still regular in its attacks. In vain the patient has recourse to every expedient, and eagerly follows the suggestions of every ill-timed officiousness, till, worn out, the very shadow of existence, he sinks into a premature grave. Should his situation be more fortunate, should those that are around him act towards him as friends, (a rare case in this island,) and remove him to a lowland situation, to breathe the purer air from the ocean; without using any remedies, the disease leaves him in a few days, and in a short

time he returns with the enjoyment of health. We may now demand what is the analogy between arsenic, charcoal, cinchona, and change of air,—for all these are febrifuges? How long will mankind continue to be amused with words as substitutes for knowledge, and sit down contented with their specifics, thinking they have obtained the ultimatum of information, while, in reality, they are allowing those opportunities to pass by them, which hereafter could entitle them to say that this portion of medicine at least is blest with *certainty?*

My situation does not allow me to proceed farther with this subject at present. In a future number I may detail to you the results of experiments and researches connected with this subject, and the materia medica in general.

St Thomas in the Vale, Jamaica, 1818.

III.

Case of Violent Concussion of the Brain. Communicated by Mr G. F. Edwards, M. S. A. Member of the Royal College of Surgeons, and Surgeon at Bath.

On the 16th of June 1819, Mr P. of this city was on a ladder at the height of about ten feet; the ladder slipt from under him, and he fell head foremost upon the pitching. When taken up the blood spun out of his nostrils and right ear in a very considerable quantity; and he was quite sensible for a few minutes after the accident. In this state he was brought home and put upon the bed, with his head kept erect by pillows. I saw him about twenty minutes after the accident. At this time he was insensible, and it appeared, from the circumstance of his having been sensible, that the force of the concussion was too great for that state to be maintained any length of time. His breathing was slow, interrupted, and stertorous. The eyes were partly open and motionless; and, by the application of a strong light from a candle, the pupils, which were widely dilated, did not contract. The pulse was slow, firm, and about 60 in a minute. The limbs were relaxed, and extremities cold. I examined the scalp, and perceived a dark spot on the posterior portion of the right parietal bone, about the size of a sixpence.

I considered the nature of the case to be extremely alarming,

and was confident that the injury was so great, that little could be promised from any effort made to save him. It did not appear to me that the skull was fractured with depression, because there was not an entire abolition of sense at the instant of the accident; therefore I considered the case to be violent concussion, with a breach of considerable vessels within the cranium, which caused immediate and considerable extravasation upon the brain, and all the symptoms of the most alarming depression.

In order to relieve the brain I opened the temporal artery, and extracted about eighteen ounces of blood by weight, and got, with difficulty, into the stomach eight grains of calomel, and ten of jalap. I next shaved the part where the blow appeared, which by this time was puffy, and made an incision down to the pericranium, (not with the expectation of finding a fracture, but with the determination of applying the trephine to allow of the escape of any effused blood that might be extravasated from the rupture of vessels,) and found that membrane detached from the skull to some extent, but could perceive no fracture. This circumstance confirmed my suspicions of a quantity of blood being shed within the cranium from some material vessels ruptured at the moment of the accident.

I applied the trephine at this spot, and, when a piece of bone was removed, blood in very considerable quantity issued from the opening. Some of the blood was grumous, and some in a liquid state, which came from above the part where the opening was made. The head was put into that position which favoured the escape of the blood; and as the breach of vessels appeared between the skull and dura mater, some hopes were entertained that the pressure on the brain would be removed by getting away the blood. Finding the symptoms not in the least abated, and more blood constantly accumulating, I thought it advisable to make another opening; accordingly the trephine was applied on the posterior portion of the left parietal bone, and, when a piece of the bone was removed, the same effects followed as on the removal of the first portion. I thought, from the quantity of blood already effused, and its continuance in a fluid state, that some of the large branches of the spinous artery of the dura mater had been ruptured by the violence of the blow.

It was impossible to determine the extent of the extravasated fluid, although the evidence was so clear of its being between the skull and dura mater, and under the part that received the blow. The symptoms alone justified the opinion that the greater part of the posterior portion, in particular, of the dura

mater, must be covered with blood, and most likely a breach of some of the vessels in the pia mater contributed also to the excessive pressure on the brain. Suffice it in this place to observe, that every effort that human means could suggest was made to remove the pressure; but all was unavailing; he died in three hours.

Examination ten hours after Death.

A transverse section of the scalp was made from ear to ear, dividing the occipito-frontalis tendon, by which the two flaps were brought with ease over the face and posterior part of the head. At the spot where the blow was received, the pericranium was detached to a considerable extent, crossing the sagittal suture posteriorly towards the occiput. The superior part of the skull was now sawn all around and removed, which exposed a mass of coagulated blood, (in weight twelve ounces,) extending over that part of the dura mater which covers the right hemisphere of the brain, from the situation of the coronal suture to the occiput, and likewise over the posterior portion of the dura mater, on the left side, from the sagittal suture downwards.

The arteria meningea media was ruptured at that part where it emerges from the sphenoid bone to appear at the anterior angle of the parietal. From this artery the blood was very liberally poured; and by its own gravity carried to the posterior part of the dura mater. After removing all the grumous blood an incision was made through the dura mater, beginning from the crista galli through its whole length to the ridge of the occipital bone. The internal surface of the dura mater was studded with dots of blood, from the rupture of small vessels; probably veins, passing from the pia mater into the sinuses.

The vessels of the pia mater were fully injected, and a large spot of extravasated blood was discovered on that part of the pia mater corresponding with the first opening on the right parietal bone, where the blow was received. The blood was evidently effused from the rupture of vessels belonging to the pia mater, and sunk into the convolutions of the cerebrum.

The hemispheres of the brain were now separated gently, so as to expose the corpus callosum. At this part of the examination every thing was in a natural state; consequently I cut away all the cerebrum until the corpus callosum appeared, in order that I might the more readily examine the lateral ventricles which lie under the medullary arch. The right lateral ventricle was laid open, and a quantity of coagulated blood, about a dessert spoonful, was lying at the posterior part. The left ventricle contained serum tinged with blood. I cannot say from what vessel this blood was effused; whether from the

anterior cerebri, (a branch of which runs over the corpus callosum,) or from the plexus choroides; the latter appear to me most probable, as they were very much distended, and these vessels run immediately into the ventricles to pour their contents into the vena Galeni.

Having removed the grumous blood and serum from the two lateral ventricles, I pursued the examination, following the course of the plexus choroides through the foramen Monroianum. I separated the thalami nervorum opticorum, and discovered the third ventricle, which contained a tea-spoonful of serum tinged with blood. Every other part of the cerebrum was perfect and natural in appearance. I now removed all the superior lobes of the brain and the hinder part of the skull to expose the tentorium and examine the cerebellum: every thing in this view of the brain presented a natural appearance. The lobes of the cerebellum were now separated, and the fourth ventricle brought into view; every part was perfect except the calamus scriptorius, which had several spots of blood upon it, whether from the concussion or not at the time of the accident, I am not able to determine.

Remarks.

The violence of the blow at the posterior part of the head caused not only excessive concussion, but a breach of vessels within the skull and brain. It appears from the examination, which I made with as much accuracy as my time would admit, that the immediate cause of death arose from the laceration of vessels in the brain, which poured their contents into the right lateral ventricle. I cannot determine whether the rupture of the spinous artery of the dura mater alone would have proved fatal, although the hemorrhage was great, when a good and sufficient outlet for the blood was made. I should be inclined to think not, and for this reason,—the pressure would, in that case, have been removed, and the functions of the brain most probably resumed. But when such an effusion happens, conjoined with lacerations of vessels within the brain, no art can avert the evil.

The circumstance of the trifling interval of sense, which was perfect in this case, decidedly confirms other authorities, that concussion with a breach of vessels is accompanied generally with an interval of sense, occasioned no doubt by a recovery for a short time from the concussion, until the contents of vessels lacerated by the blow are poured into and upon the brain, which occasions pressure and the loss of sense, never again to return. It may, I think, be fairly presumed, that, if no vessels

had been ruptured, either upon the pia mater or those which emptied themselves into the lateral ventricles, this case might have recovered; at any rate; the chances were favourable to such a result; because the temporal artery was opened immediately, and a large quantity of blood extracted; and also an opening was made in the skull sufficiently early to let out the blood effused on the surface of the dura mater.

If I had not given all these chances to the life of my patient I should have deemed myself blameable, and, that they were not successful, can only be attributed to the causes which were so manifestly displayed in the dissection.

Bath, August 28, 1818.

IV.

A Case of Concussion, with Violent Re-action. By James M'Intyre, Surgeon, Newcastle-upon-Tyne.

John Hornsby, aged 27, a pitman to business, stout and athletic, fell upon a railway, down a pit-shaft, 36 feet from the surface, on the 16th October 1818. At 10 o'clock, P. M. I was called to him, being two hours after the accident. On examination, I found two lacerated wounds on the back part of the head, each 1½ inch long, both exposing the cranium; his shoulders, back, and loins severely bruised, his thighs, breech, and scrotum much discoloured; pulse 60, weak and languid; breathing laborious; his countenance pale and ghastly; his extremities cold and benumbed; his eyes heavy and glazed; often desiring change of posture; and unable to void his urine. Six bottles of hot water were immediately applied to the soles of his feet, the palms of his hands, and different parts of the body; warm fomentation to the bowels. The wounds, &c. being dressed, 40 drops of laudanum were given in a glass of hot spirits and water: at 11 and 12 P. M. the spirits and water was repeated without the laudanum.

17th. 1 A. M.—At length he showed some signs of general warmth. 2 A. M.—Breathing laborious, with constant pain in the chest, and region of the bladder, increased on inspiration, or the slightest pressure. Five or six ounces of thick bloody urine were drawn off with the catheter, his pulse being now above the healthy standard, and the veins seeming dark and turgid; 8 ounces of blood were taken from the arm, a pint injection administered, and ten grains of calomel given at a dose. 7 A. M. Pulse 90, severe pain in the chest, with constant thirst and uneasiness; 16 ounces of blood were taken from the arm; the pulse fell to 70,

weak and tremulous; a mixture, with 3 ounces of sulphate of magnesia, ½ to be taken every two hours till it operates. 5 P. M. Pulse regular; seems more composed; has taken all his medicines; had three or four scanty stools; expectoration and cough being troublesome, an oily emulsion was ordered; likewise lb. ss. of strong infusion of senna with salts, to begin in the morning, and repeated till the bowels are freely opened.

18th. 9 A. M.—Pulse 90, wiry; has taken all his medicines; had two motions, and made his water freely; breathing laborious; his countenance anxious and desponding; his abdomen tumid and painful; cannot bear the slightest pressure; 40 ounces of blood were now taken from the arm. At one period of the bleeding the pulse rose to 104; it then fell to 70; soft and pleasant; 12 grains of calomel to be given immediately; the purging mixture repeated.

19th. 12 noon.—Pulse 80, wiry and vibrating; medicines operated partially; had delirium during the night; thirst, fever, and restlessness continue; abdomen painful, tense, and puffy: 36 ounces of blood being now taken from the arm, he became pale and faint for the first time. The arm being bound up, and examining the pulse, I was much surprised to find it above 100, full and throbbing. Having removed the bandage, 12 ounces more were allowed to flow in a full stream. Pulse now 70, soft and pleasant to the feel. He expressed himself much relieved from the last bleeding. Two of the pil. rhei to be given immediately; lb. i. of the purging mixture to be repeated; lb.ss. of the mist. magn. c. rhei; lb. i. effervescing mixture to be taken in small doses.

20th. 12 noon.—Has taken all his medicines; voided 31 dark feculent offensive stools; had return of delirium during the night; wounds on the head healing mostly by the first intention; pulse 80; abdomen much subsided; pain less on pressure; thirst and fever abated; 8 leeches to be applied over the bowels, and 4 on the temples; all the medicines to be continued as yesterday.

21st. 1 P. M.—Has taken all his medicines; voided 15 feculent offensive stools; pulse 108; severe headache, with occasional delirium; pain in abdomen nearly gone; 14 ounces of blood were now taken from the arm. During the flow of blood, the pulse rose to 116; it then became weak and tremulous; feels his head much relieved; can turn it from side to side, without causing that intolerable pain he had during the night. A dose of pills, with 1 grain of opium, and 5 of camphor, to be taken at bedtime; the effervescing and rhubarb mixtures to be repeated; and six leeches to be applied to the temples.

22d. 2 P. M.—Pulse 88; rested well during the night; fever much abated; pain of bowels entirely gone; has an inclination to eat. The pills and rhubarb mixture to be continued, and six leeches to the temples.

23d. Pulse 84; has no particular pain, but complains of general soreness and difficulty of expectoration. Pills and emulsion repeated.

24th. Pulse 86; continues improving. The pills to be continued.

25th. Pulse 84; rests well; bowels regular; wishes a little animal food. To have a little chicken for dinner; lb. ss. of camphor mixture, and an ounce of tinct. colomb., two spoonfuls to be taken three times a-day.

26th. Pulse and bowels regular; pills to be repeated.

27th. Continues improving.

28th. Pulse regular; appetite improving; sat up for an hour yesterday; found himself much refreshed. One ounce of decoction of bark to be taken three times a-day.

31st. Is quite convalescent, having no complaint except general weakness, accompanied with shifting pains, and takes no medicine.

Nov. 11th. Walks about the village; seems in every respect well.

Jan. 1, 1819. Has been employed at light work for some time back; two days ago he resumed his work as a pitman, and has no complaint, organic or visceral, as far as I know.

I feel indebted to Mr Gray for his assistance, on one or two occasions, during the above treatment.

V.

Case of Eczema Rubrum, with Remarks. By ANDREW CRAWFORD, Junior, M. D. Physician to the Hampshire County Hospital, Winchester.

THE following case of eruption, occasioned by the use of mercury, was considered as having arisen from some different cause, when the patient was admitted into the hospital in this city, as she had never been the subject of syphilis, and had not, as far as she knew, been using mercury in any form when the eruption first appeared. But, some time after her admission,

it was discovered that she was seized with it after exposure to cold, while taking, for a cough, some pills, which she was desired to discontinue, if they should affect her mouth. From this circumstance, I think there can be no doubt that they were mercurial, and I am inclined to attribute the origin of the disease to their influence on the system.

Sarah Ellcock, aged 34, was admitted into the hospital July 3d, 1816. There was a copious discharge of a thin yellowish ichor, from the greater part, or, I might say, the whole, of the surface of her body, and the cuticle was scaling off in large pieces, leaving the surface under it of a red colour. The discharge was of an offensive smell, and was most copious from the groins, the inner surface of the thighs, the axillæ, and at the bends of her arms. Her appetite was good; tongue clean; pulse about 110; bowels rather loose; catamenia irregular.

She said she had had a fever about nine months before, from which she recovered perfectly. It was about six months afterwards that she began to use the pills I have mentioned above. Having taken one every night for three weeks or a month, and having been exposed to cold, an eruption broke out over her *whole* body, beginning on the epigastric region, and on the arms and thighs. In the course of a day or two there was a considerable exudation, most copious from the bends of the joints, excoriating, and producing fissures in the skin, which were painful on motion. Immediately on the appearance of the eruption, she discontinued the pills, and had been at one time almost quite recovered, but had afterwards suffered a relapse.

The ung. cetacei was ordered to be applied to the parts from which there was the greatest discharge; decoction of bark was prescribed internally; and she was desired to use the tepid bath. Subsequently the cerat. plumb. superacetat. was applied to the parts chiefly affected, and sulphuric acid was given internally. Under this treatment, the discharge soon ceased, but the skin still retained a reddish colour, and she had frequent relapses. By the end of August, the cuticle having *entirely* scaled off, and the hairs having fallen from the scalp, every part of the body was of a natural colour, and completely dry, except the nape of the neck, and the axillæ, from which there was still a very slight discharge. Having so far recovered, she only remained in the hospital in order that the cure might be confirmed, and, on account of an ulcer on her leg, for which she was put under the care of one of the surgeons.

On the 20th of October, the eruption returned in exactly the same manner, according to the patient's account, as it had first appeared. Upon inquiry, it was found, that, although she

had not been taking mercury internally, in any form whatever, yet there had been applied around the ulcer on her leg an ointment, partly composed of ung. hydrarg. nitrat, and with this she had also, of her own accord, and without the knowledge of the surgeon, anointed the axillæ, which were still hard and rough. Having done so for five or six days, and having, as she thought, caught cold, the eruption again appeared.

It was ushered in with chills, which were followed by heat and itching of the skin. The integuments were of rather a dark red colour, and appeared distended, particularly on the face, which was much swollen. The tarsi of the eyes were considerably inflamed; pulse 120; much thirst; appetite good; bowels regular. On close inspection, the eruption had the appearance of innumerable minute vesicles; these, after two or three days, discharged a thin yellowish ichor, eroding the skin, and reducing the patient to the same state as when she was first admitted.

The liniment. aquæ calcis was applied to the parts from which there was the greatest discharge, and citric acid was prescribed internally. As soon as the irritation of the skin was somewhat diminished, recourse was also had to the tepid bath; and, under this mode of treatment, by the 6th of November, the surface of the body was completely dry and of a natural colour.

Dr Moriarty mentions a case, communicated to him by Mr Hewson Bigger, in which the eruption was reproduced three or four times by the use of opium. The same consequence followed its exhibition in this case. On the 9th of November, the patient took one grain at bed-time. She felt a tingling sensation over the surface of her body in the course of half an hour, or a little more afterwards, and, by the next morning, there was a considerable exudation, accompanied by the same symptoms as in the former attacks. The liniment. aquæ calcis was ordered as before. The tepid bath was used as soon as the irritation had somewhat subsided; and, by the 17th, the skin was completely dry.

After this she had, once or twice, a very partial redness and exudation, which could only be attributed to the coldness of the ward. On the 11th of December, she was dismissed from the hospital, the skin being at that time perfectly dry, and of a pretty natural appearance.

The advantages derived from the method of treatment in this case must be chiefly attributed to the external remedies. Indeed, it is doubtful that those used internally were of any benefit. The last attack, in which there were none applied, was sooner terminated than any of the preceding. It, however, ap-

peared to be less severe, though the surface of the body was very generally affected.

While the irritation was considerable, the liniment. aquæ calcis seemed to be of the most benefit, by lessening the disagreeable itching sensation, rendering the motions of the joints less painful, and tending to diminish the discharge. After the irritation had somewhat subsided, the tepid bath appeared to be of considerable service, by cleansing the skin, and detaching the loose cuticle.

It has been questioned, whether this disease ever occur, except when the system is under the influence of mercury. Dr Rutter's case, in the 5th Volume of this Journal, and Dr Marcet's, in the 2d Volume of the Medico-Chirurgical Transactions, sufficiently prove, that, when a person has been previously affected with the disease, it does sometimes recur without the use of mercury. But it does not appear certain, from our present knowledge, that, in any case, the *first* attack has happened, except when the constitution was under its influence. Dr Rutter's patient was first seized while under a gonorrhœa, for which he had taken mercurial pills till his mouth was affected; and Dr Marcet's had the same disease, for which he had used *some internal remedies*, but none of which affected his mouth. It is not improbable, however, that these internal remedies were mercurial, and that by them the disease was produced. In the case I have just related, the pills which the patient was taking, when the eruption first appeared, never affected the mouth, and yet there is not much reason to think, that the cold to which she was exposed would have, of itself, produced the disease. Since a few grains of calomel, a medicine prescribed in so many diseases, sometimes occasion salivation, and, as this eruption has occurred during the exhibition of mercury, although the mouth was not at all affected, it would require a very intimate knowledge of the patient's previous history, to enable us to pronounce that the disease is not attributable to mercurial influence.

Some have supposed, that exposure to cold is also necessary for its production, even when the system is under the influence of mercury. In most of the cases related, it certainly did supervene on exposure to cold; and this circumstance, together with the frequent attendance of catarrhal symptoms, and the power which cold possesses, in some instances, of producing the disease, in those who have been previously affected with it, certainly favour the supposition. But, on the other hand, in some cases, it was not observed that the patients had been exposed to cold; Dr Moriarty says, there was more commonly an

increased heat of the atmosphere when the disease most prevailed; and, in a case related by Mr Ramsay, in the 7th Volume of this Journal, the eruption was reproduced by the exhibition of mercury, although the patient was kept constantly in a warm temperature.

From Mr Ramsay's case, it appears, that the disease may be brought on by mercury, without exposure to cold, provided the patient have been previously affected with it. And, by Dr Rutter's and Dr Marcet's cases, cold is also shewn to be capable of producing it in a person that has been subject to it before. But it does not appear certain, that either mercury without exposure to cold, or the latter without the use of mercury, has occasioned its first appearance. It may, therefore, be concluded, that the system, by being once affected, is rendered more susceptible of the same diseased action again.

Mr Hewson Bigger's case, mentioned by Dr Moriarty, in which the eruption reappeared three or four times on the exhibition of opium, and the recurrence of the disease in Ellcock immediately after taking one grain of that medicine, prove, that, by it, at least in some instances, the disease may be occasioned in those who have been previously affected with it; and thus mercury and cold are shewn to be not the only exciting causes of the eruption.

Dr Spens has properly remarked, that, in those who are attacked by this disease, there must be some peculiarity of constitution which predisposes them to be so affected; for it is much too rare an occurrence to be a necessary consequence of any, or all of those causes we have mentioned.

As this eruption puts on a vesicular form, the appellations of mercurial *erythema*, or *lepra*, are inapplicable to it; and as mercury is not the only exciting cause, it is improper to denominate it *hydrargyria* or eczema *mercuriale*. Dr Bateman describes it under the title of eczema rubrum; and, although it differ from the definition of eczema, in being attended with redness and inflammation around the vesicles, and often with some febrile symptoms, yet there is no other genus in the vesicular class to which it is so closely allied.

Winchester, October 31, 1818.

VI.

Case of an Unusual Termination of Phthisis Pulmonalis, by a Sudden and Fatal Hemorrhage from the Lungs. By S. G. Lawrance, Member of the Royal College of Surgeons, London, and Assist. Surg. to the Military Asylum, Southampton.

C—— R——, aged 19, a delicate female, was suddenly attacked with a spitting of blood, while walking, on the 26th December 1817, and five or six ounces of blood were expectorated. It recurred on the 27th, when nearly an equal quantity was lost. She has had a cough, with occasional pain in the chest, for some time, but until now, had had no medical advice. She had always menstruated very irregularly.

Venesection and the usual antiphlogistic mode of treatment were employed. The hemorrhage did not return, but the cough continued until the beginning of February 1818, when it entirely left her, and, though much debilitated, her appetite returned, and she appeared to be perfectly recovered.

She remained well until the beginning of April, when she caught a severe cold, and the cough then returned, with copious expectoration, occasionally streaked with blood, and continued, in spite of every mode of treatment. The expectoration at length became purulent, attended with the usual symptoms of phthisis, with hectic fever, profuse night-sweats, &c. Digitalis was given with benefit, appeasing the cough, which was the most troublesome symptom, and lessening the frequency of the pulse; but yet with no permanent benefit, for when discontinued on account of its producing slight vertigo and an intermitting pulse, in a short time the cough returned as before, the pulse varying from 80 to 100.

Tar vapour, as lately recommended by Sir Alexander Crichton, was also tried, but the cough was not mitigated, nor did any benefit appear to result from its use. Being originally thin and delicate, she soon became greatly reduced and emaciated, and the phthisical symptoms rapidly increased. On the 9th of September, during a violent fit of coughing, she suddenly spit up two large masses of coagulated blood, of a very firm consistence, resembling pieces of liver; their upper surfaces were covered with frothy mucus, and had a cellular appearance. The largest mass weighed upwards of an ounce and a quarter, of which a rough sketch is annexed; the lesser, three quarters of an ounce. This was followed by an immediate and profuse hemorrhage, and she instantly expired.

Examination of the Body.

Thorax.—The *lungs* on both sides of the chest adhered very firmly to the costal pleura, and their investing pleura was much

thickened. The *right lung* was tuberculated, and had a few small vomicæ in it. The *left* was much more diseased, being full of tubercles, and small abscesses, and at the upper and back part of this lung there was a large cavity, containing only frothy blood and mucus; in this, no doubt, the large coagulum had been contained, as the cavity corresponded in point of size.

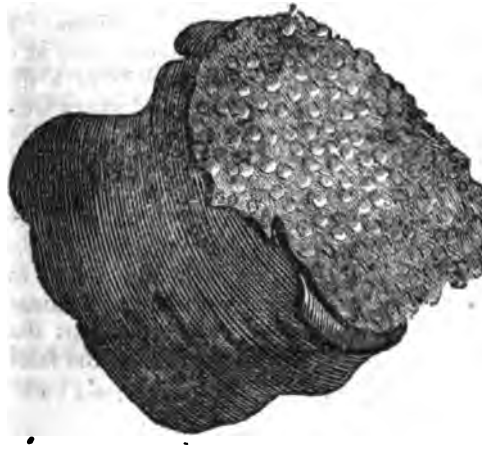
The *pericardium* was thicker than natural, and contained about ʒi. of serum.

The *heart* was small, flaccid, of a pale colour, and contained very little blood in its cavities. There was no extravasation of blood or other fluid in the thorax.

Abdomen.—The liver was much larger than natural, extending quite across the abdomen, so as to cover the stomach, to which it was connected by thread-like bands, and its upper surface firmly adhered to the peritoneum, and to the diaphragm. The *stomach*, *spleen*, and rest of the abdominal viscera, shewed no marks of disease.

Remarks.—The dissection proves this to have been a case of phthisis pulmonalis, and its unusual termination was the more extraordinary and unexpected, as there had been no recurrence of hemorrhage from the 27th December 1817, until her death. For the last two months I daily observed the expectorated matter, and it was scarcely ever *even streaked with blood.* The time, therefore, when the blood, which formed the coagula, was first effused into the lung, is uncertain, but that they acted as plugs to the mouths of the pulmonary vessels which had been ruptured is evident, and that they performed this office for some considerable length of time, is, I think, proved by what I have stated above, as well as by the very firm and solid texture, and general appearance of the coagula.

Southampton, Oct. 5, 1818.



VII.

Case of Complicated Hernia, cured partly Spontaneously, and partly by Operation. By Mr Edward Welchman, Jun. Kineton, Warwickshire.

Thomas Constable, of Butlers-Marston, Warwickshire, aged 59, has been subject to rupture on the left side many years; which he said he had always been able to reduce with the greatest ease, until to-day, 18th May 1818, about two o'clock, when the hernia appeared whilst he was shaving. His usual efforts to reduce it were unsuccessful, and he soon experienced considerable pain; at length, becoming very uneasy, he sent for surgical assistance. I went to him in the evening, and found him with a hernia, of the mixed characters of femoral and inguinal, but most decidedly of the former, agreeing with Mr Goate's opinion, who had previously seen it, and attempted its reduction. Accordingly I attempted to reduce it as a femoral rupture, but failed. About twelve o'clock I administered a common enema, and at one o'clock, *ant. merid.* of the 14th, I injected a tobacco glyster, (ʒij. to a pint.) Sickness came on in five minutes, and presently became exceedingly distressing. In twenty minutes the pulse became very small, and perspiration profuse. I now attempted again to reduce the rupture, still unavailingly, and left him, desiring the attendants to prepare some hot water for the slipper bath, which, not being at hand, and the water being obliged to be heated at a neighbour's house, occasioned a great delay, so that it was eight o'clock before he was placed in the bath, where he remained half an hour. The taxis was again tried, both by my father and Mr G. but in vain, and these endeavours considerably increased the pain: pulse 60 and small; sickness stopped; hiccough at times. The operation was now determined upon, and commenced at ten o'clock. On opening the sac, a considerable quantity of a dull-coloured bloody fluid escaped at first in a jet, and afterwards continued to ooze out. The contents of the sac were partly omental, and in part intestinal; the latter, with a portion of omentum, protruded through the femoral ring; the remainder of the omentum came through the inguinal canal. The two pieces of omentum were united by adhesive inflammation, apparently old. The nuckle of intestine, about an inch and a half in diameter, had exactly the appearance of a coagulum of venous blood; the whole of the omentum looked healthy, except that the veins were very turgid. The falciform process of the fascia lata con-

tributed in a great degree to form the stricture, * for it was with difficulty that I inserted my nail between it and the intestine, and divided it without the use of a directory. This being done, a very slight incision of Gimbernat's ligament, nearly at its insertion in the pubes, allowed me to return the intestine easily.

Besides the connection of the two portions of omentum to each other, there were little bands of adhesion extending across the inguinal canal, confining the piece of omentum protruding through that aperture in its situation. Upon a more particular inquiry, I now understood, that our patient had not been able to reduce the whole of his rupture, and he thought there now remained about the same bulk as usual. I left the omentum as I found it. The integuments were brought together by three sutures and adhesive straps, with compress and bandage over it.

He was ordered to take small doses of a mixture containing sulphate of magnesia and carbonate of magnesia every two hours, till stools were procured, and to assist its operation by glysters, if it did not procure stools in four or five hours. I saw him in the evening, by which time he had had three comfortable evacuations from the bowels. Pulse 80 and soft; skin moist; he is cheerful.

15th. This morning pulse 80 and soft; when he moves, feels soreness at the wound, and sometimes a little pain in his bowels, as he supposes, from wind, being relieved on passing it downwards; no pain on pressure; skin moist; tongue a little dry; has had four more stools; slept well; ordered a saline mixture. In the evening his pulse had risen to 100; had felt more pain; could bear moderate pressure without complaining; had had thin stools since morning; I took twelve ounces of blood from his arm.

16th. Has had a comfortable night; no pain; pulse 74; skin cool and moist; no buff on the blood drawn last night; one stool this morning a little formed; ordered some aperient mixture.

17th. Same as yesterday; wound dressed, which looks well.

Nothing worthy of notice happened from this time. He was quite well by the 31st. He wears a bag truss covering the tumour, which is about the size of a duck's egg

Observations on the above Case.

The jet of fluid that immediately escaped on opening the sac, proves how much it was distended, and if the degree of stricture be considered, the collection of fluid to such an extent points

* See Lawrence on Hernia, p. 354, Second Edition.

out the accuracy of Mr Charles Bell's remarks, as to the manner in which the sac and intestine fill and become distended.* This fact being established, should urge us to the earliest attention in endeavouring to reduce a hernia; and when well directed efforts have been made without success, the operation ought to be had recourse to immediately, for the difficulty of reduction must increase every moment after strangulation has taken place.

There is nothing very uncommon in the existence of a femoral and inguinal hernia at the same time on the same side; but that the two portions of omentum should have been united, and, particularly, that the inguinal hernia should have undergone a spontaneous cure, is, I believe, a novel circumstance. I conclude the latter happened about six years ago, when the man says, that pain in the left groin came on suddenly, and continued so violent for about three or four hours, that he could not help throwing himself about, when the pain suddenly diminished, leaving a soreness which lasted three or four days. The acute pain I suppose to have arisen from a small portion of intestine having been strangulated at first, and the sudden diminution of pain may be ascribed to its release. The subsequent soreness seems to indicate that an inflammation had been produced. Whether the two portions of omentum became united at this time is doubtful: it might have happened from pressure. It is equally inconclusive, I apprehend, which of the ruptures took place first. The peritoneal coat of the femoral rupture was very distinct, except where the omentum had adhered. I could not make out the proper sac of the inguinal rupture, and did not like to lengthen the period of the patient's suffering, by making a more particular examination.

VIII.

An Account of some Alarming Symptoms caused by Spiculæ of Bone in the Stomach. By Joseph M'Sweeny, M. D.

Although the power of digestion has been found capable of subduing very hard substances, yet the human stomach, which often with difficulty digests solid articles of food, may be found sometimes incapable of acting on so solid a substance as bone. Even where the power of the organ is capable of acting on such a substance, in some cases so long a time may be necessary, that the foreign body may be productive of serious consequences. It is not to be inferred, that every substance diffi-

* Surgical Observations, Part Second, p. 181.

cult of digestion, or indigestible, is kept from passing out of the stomach. Daily experience shows, that the pylorus does not keep so strict a guard. Different indigestible substances have passed through the alimentary canal; even articles of food have passed unchanged. No doubt, pieces of bone of an unirritating shape have also passed without causing inconvenience. The pylorus not being irritated by a smooth body, can gradually dilate, and can allow it to pass without producing uneasiness; but where sharp spiculæ of bone have been swallowed unnoticed, alarming, perhaps fatal consequences, have ensued, without the cause being suspected. From the consideration of the pylorus, we must perceive the obstacles it will oppose to the passage of a sharp body. It is endowed with contractile power, and is sensible to a stimulus. The contact of a sharp body must stimulate it violently, and must consequently cause it to contract, and thus oppose the passage of that which irritates it.

A gentleman at dinner swallowed a small fragment of bone. On the same evening, uneasy symptoms came on. He felt a pain in the centre of the scrobiculus cordis rather dull, but causing great anxiety. It sometimes changed its situation, but was mostly referred to the centre of the scrobiculus cordis. He sometimes had intervals of ease, at other times his sufferings became aggravated in a violent degree. He then could not point out the situation of the pain so exactly as before. It was felt more internally, as if some part inside was grasping some sharp body. In this state his body was bent, his hand was firmly pressed against the region of the stomach, his pulse became small and quick, a cold sweat broke out over the surface, and his anxiety arose to an alarming degree. From this state he generally found relief by change of posture, and the pain mostly resumed its former situation in the centre of the scrobiculus cordis. He had a constant desire of keeping the hand on the situation of the pain. I had recourse to diluted muriatic acid as strong as I could venture to give it. All bad symptoms ceased under its use, and he found no inconvenience from the acid, which freed him from the state of suffering in which he had been. I met with similar symptoms in the case of a gentleman who was conscious of having accidentally swallowed a fragment of bone at dinner, a good many days before. I had recourse to a similar practice, and with complete success.

Mrs P—le, of Nicolson Street, in Edinburgh, consulted me last winter about a dull kind of pain in the region of the stomach. Not being decided as to the nature of it, I merely recommended attention to regimen. She applied to me a second time, and stated that she was not better, and complained of the great anxiety it caused her. I now suspected, that the pain might arise from a spiculum

of bone accidentally swallowed. On close attention to the symptoms, I found they were the same as those stated above. She had the constant desire of keeping the hand on the situation of the pain, which was mostly felt in the centre of the scrobiculus cordis. There were intervals of ease, at other times the sensation of a sharp body being grasped, threw her into a state of agony. In this state, the pulse became small and quick, and a cold sweat broke out over the surface. Although she had not the least recollection of having taken any thing that would account for the symptoms, yet I did not hesitate in thinking, that the case was similar to those mentioned, particularly as she had taken food in which a spiculum of bone might have been. I added as much acid to a half pint of water as I thought would be sufficient to relieve the symptoms without injuring the stomach. She took this quantity at one draught; but my disappointment was indeed great, when she complained of being rather worse on the following day. The acid had evidently increased the irritability of the stomach without acting on the foreign body. I now supposed that the acid had passed out of the stomach without remaining a sufficient time to act on the spiculum of bone; and as the irritability was increasing daily, I determined not to lose time, but to have recourse to the most vigorous practice at once. I made the diluted acid much stronger than what she had taken the day before; and having taken a quantity of it to be certain that it was not too strong to injure the stomach, I explained her case to her, and she willingly agreed to adopt any plan of treatment I should propose. She took a wine glass of this diluted acid every ten minutes. After a half pint of it was taken in this manner, she took the same quantity in one draught, and I was happy to find, after it, that the pain and anxiety had ceased with which she had been in agony during thirteen days. She now said she felt only a general sense of soreness; she slept well that night, next day she still felt the general sense of soreness, but she was in good spirits, and completely free from the pain. Having recourse to the remedy quickly on account of the urgency of the symptoms, unfortunately I did not ascertain the strength of the diluted acid I used. The standard I employed was to try it on myself in every case, and to take it as strong as I could with safety. The plan employed to prevent the teeth from being injured, was, to make the patient open the mouth as wide as possible, and to protrude the tongue so as to cover the teeth of the lower jaw; the edge of the glass was then rested on the tongue, and the diluted acid was swallowed without allowing it to come in contact with the teeth of the upper jaw. The mouth was repeatedly washed with water. In this manner, the teeth escaped uninjured even in the case of the pa-

tient who had been affected thirteen days, and who took a deal of the acid.

If this patient had been allowed to remain without medical assistance, it may be fairly presumed, that a fatal gastritis or ulceration of the stomach might have at length ensued. A thickened or ulcerated state of the pylorus might have been caused, and I am afraid, that affections of this kind have been classed under the title of scirrhous pylorus, while the cause of the mischief has not been suspected. It is possible that an ulceration would take place, through which the contents of the stomach would be extravasated into the abdomen. A small fragment of bone might easily escape observation when enveloped in the ingesta of the stomach. It would be a desirable thing that the attention of examiners would be in future directed in search of such a cause in cases of extravasation of the contents of the stomach into the abdomen, and in cases of diseased pylorus. There is some danger of confounding the symptoms with those of cramp of the stomach, as a patient may have swallowed a spiculum of bone without being aware of it. The bent position of the patient, the contortions of his body, his hand pressed against the seat of the pain, the anxiety depicted on the countenance, and the intervals of ease, may deceive a practitioner suddenly called in, and may lead to injurious practice. These symptoms may be distinguished from those of cramp of the stomach, by the following marks: The pain is mostly felt in the centre of the scrobiculus cordis, and is described as if it could be covered with the point of the finger. In this situation, although the patient has a desire of pressing the hand gently against the seat of the pain, yet very firm pressure increases it. When the pain is felt more internally, causing the sensation of something being grasped, firm pressure gives relief, the pulse becomes quick and small, and a cold sweat breaks out over the surface. Perhaps it may be asked, would not it be better to employ an emetic in such a case? A person took an emetic on account of having accidentally swallowed a sharp body, and soon after expired. As the surgeon who was called in to examine the body, and by whom I heard the case related, will probably give the particulars in some periodical work, I shall not anticipate him; but the account of the dissection was quite sufficient to prevent me from employing an emetic. As a sharp body is prevented from passing, on account of its irritating the pylorus, a purgative medicine was, I think, contraindicated; it would be likely to make the pylorus suffer more. The diluted acid must have afforded relief by acting on the sharp irritating points which were fortunately most exposed to its influence,

and thus allowing that to pass which was before prevented by the irritating points causing the pylorus to contract violently, when they came in contact with it.

IX.

Observations on various Ulcers of the Extremities. By John Foster, Surgeon to the Newcastle Infirmary.

Having experienced the efficacy of Mr Brodie's method of treating varicose ulcers of the extremities, it becomes my duty to assist in establishing the merits of an operation proposed by one to whom the medical world, and society in general, are so much indebted for his useful and well-directed exertions in improving the practice of surgery. My motive, therefore, in placing these two cases of the disease before your readers, is to add my testimony of the safety and utility of the practice, and to direct their attention to the subject, who may not have seen that gentleman's paper, published in the Medico-Chirurgical Transactions.

Varicose ulceration is not only attended with that inconvenience and concern to the patient, which any ulcer is calculated to produce, but it is, moreover, accompanied with disagreeable and painful sensations, and sometimes dangerous consequences. I have seen the pain of this disease, together with the other morbid sensations which it occasions, so harassing, as to make life burthensome; and this I have sometimes found to be the case, where no ulceration was present, but simply a varicose state of the veins; which, I apprehend, might have been benefited by the same mode of treatment, had it been adopted. I have seen a person almost lost by hemorrhage in consequence of ulceration destroying the coats of a varix; his boot having become filled with blood, and faintness occurred, whilst he was, unconsciously, pursuing his usual occupation.

These circumstances give a more important character to varicose limbs than the disease has generally met with, and convince us of the value of any treatment by which we are enabled to remove so unmanageable a disorder. For it is evident, that it has, at all times, been a source of perplexity to the surgeon, and disagreeable confinement to the patient. Hence the variety of applications, and painful and even dangerous operations,

which have, at various periods, been proposed for its cure; but which, generally speaking, have been attended with no success.

The principles of the operation which Mr Brodie has introduced, are simply to divide the most important varix in a varicose limb with the least possible exposure to the action of extraneous substances, so that the consequent inflammatory action may be merely sufficient to obliterate the varix without the risk of the coats of the veins becoming generally inflamed. I have done the operation with an instrument made according to the sketch which Mr Brodie has attached to a paper in the 7th Volume of the Medico-Chirurgical Transactions. This instrument is a narrow bistoury, slightly curved, and terminating in a sharp point, and has the cutting edge on the convex side. In operating, the most painful and most conspicuous varix is to be chosen. The knife is to be introduced on one side of the cluster, in such a way, that one of its flat surfaces may be upon the coats of the vein, and the other turned towards the integuments. The sharp edge is then to be turned towards the vein, which movement is generally sufficient to divide the varix. The instrument should be withdrawn after the manner it was introduced. I have always found the consequent hemorrhage completely under command. The pain, after I have performed such operation, was trifling; and, when the dressings were removed, which I have usually had done about the third or fourth day after, I have found the orifice closed; and obliteration of the varix seemed to have happened. This event had a surprising effect in reducing the general distention of the limb, and improving the appearance of the ulcer. The secretion became healthy; a vigorous set of granulations formed upon the morbid surface peculiar to this species of ulcer; the callous edges disappeared; and rapid cicatrization ensued.

They who have witnessed the great expence which public institutions incur from these tedious ulcers, and the unsatisfactory trouble they give to the surgeon, will rate this method of treating them as no small improvement in surgery, although it may want the splendour of many of the greater achievements of the art.

Cases.

John Swan, aged 50 years, was admitted into the Newcastle Infirmary on the 24th December 1818, with the following complaints: He has an ulcer above the inner ankle, about two inches long, and an inch broad. It is hollow in the centre, and its surface has an ill-conditioned appearance. The secretion is ichorous, and the edges

hard and elevated. The subcutaneous veins of the limb are much dilated, as far as the groin; and there are two or three painful varices, exceedingly hard, a little above the ulcer. This state of the limb is accompanied with constant lancinating pain, and a sense of increased heat. The veins have been varicose about fourteen years; and the ulceration took place two years ago.

On the 29th of December, I divided the largest varix immediately above the ulcer, with the knife, and in the manner I have already described. The bleeding was profuse; but ceased as soon as pressure was applied. He complained of a little pain for two or three days.

On the 1st of January the dressings were removed, when the varix was found flattened, and the orifice made by the knife healed. The dilatation of the veins appeared to be generally lessened, and the unpleasant feelings of the limb had abated. The secretion from the ulcer was of a better consistence, and healthy granulations were sprouting, here and there, through the morbid surface of the ulcer. The sore went on progressively healing, and was completely cicatrized on the 20th of January, when also every uneasy feeling had left the limb. A tight lacing stocking was applied to the leg, which he was desired to wear until every relaxation of the integuments should disappear.

Thomas Jobling, aged 45 years, had a troublesome ulceration in the leg above the inner ankle, which has been always difficult to heal, and when healed, the cicatrization has been soon destroyed, upon taking the usual exercise.

He was admitted into the Infirmary in May 1817, and at that time the ulcer was similar to the one Swan laboured under. The veins of the leg were varicose, and the integuments œdematous. Other unpleasant feelings connected with varicose extremities were present. As it was desirable for the man that his leg should be effectually cured, I proposed a division of the varix, to which he readily assented; and on the 19th May I divided the largest cluster of varices anterior to the ankle, and below the ulcer. The pain subsequent to the operation never exceeded the pain he was in the habit of suffering from the ulcer. The puncture healed shortly, the veins became generally smaller, and the œdema disappeared: the ulceration healed rapidly; and on the 21st he was discharged cured.

I have seen this man lately, and his leg remains in the state it was when he left the Infirmary. There has not been the least disposition to ulceration, or any morbid action.

Newcastle, April 14, 1819.

X.

On Diagnosis. By Charles Ritchie, Surgeon, Irvine.

"It is to be wished, I say, that some physicians in all ages had made it their business to pursue and improve the doctrine of signs; had that been done, questionless the profession of physic had arrived at its acme long ere now, at least as far as our mortal state will allow."

Baglivi, Book ii. chap. 8.

As there is nothing which can more immediately affect the accuracy or success of a physician's practice than the truth or fallacy of the diagnosis which he is accustomed to form; so there is nothing which ought so powerfully to excite his attention as the peculiarities which different diseases assume. This is a subject of inquiry so essential in our profession indeed, and one which is so apt either to be neglected, or conducted on improper principles, that it cannot be too frequently recurred to, or too strongly insisted on. The experience of the medical practitioner is constantly presenting him with pathological facts to which he is a stranger, and with combinations of disease which he has never anticipated; while the precepts of his art, the most general in their application, are often fettered with exceptions, and the best established of the principles which direct him are subject to changes. A physician, in the exercise of his professional duties, is thus like a mariner in an unknown sea. The leading features of the scene may be familiar in both cases to the imagination, and their probable dangers estimated pretty correctly from analogy, but those of a minuter character cannot be so well judged of, and must consequently require an incessant examination.

The difficulty of this task, known to the physician, must always be as severely felt by him as its necessity, for, as it embraces every thing which is important, so must it also include every thing which is uncertain in his profession. A young man complains of excruciating pain in the heel, rendering him unable to walk, and gradually exhausting him by its severity. He knows of no cause which could produce it, and with the exception of an indefinite fear of inflammation, it may be of the bone, or of the nerve, or of the periosteum, his surgeon is as ignorant as himself. Bleeding, blistering, fomentations, frictions, sudorifics, mercurials, purgatives, and electricity, are all employed, and all employed without effect. The case is dismissed as hopeless, an abscess points at the root of the great toe, discharges matter, and in the course of a few weeks the lad is well.

Such is a specimen of the cases which every practitioner is accustomed to meet with. They may tend to enlarge his acquaintance with disease, and they will point out to him how necessary this is to the right performance of his duties; but they must also not unfrequently convince him how difficult such an acquaintance is to be obtained.

It is not my intention, in this paper, to lay down any thing like positive rules, to be uniformly observed in forming a diagnosis. All that I wish to do is, simply to point out some circumstances which may cause us, if they are not kept constantly in view, occasionally to form an erroneous one; and as examples are in medicine, as in every thing else, the best means of producing conviction, I shall endeavour, as I go along, to illustrate my remarks, from the history of cases which have occurred to myself.

In the first place, then, there is not perhaps any thing which contributes more to the slackness of physicians in relation to inquiries of this nature, or, which is more likely, to blind them to the importance of a careful investigation of disease, than the implicit dependence which some of them place in what they call a *visus eruditus.* I am far certainly from underrating the importance of this faculty to my brethren, but I would have the physician who thinks himself in possession of it, to examine carefully before he applies it to his patient, whether what he calls a visus eruditus may not rather be the fumes of an hypothesis, or the offspring of indolence. A physician who forms his opinions of a case from the first glance which he receives of the countenance of his patient, however highly he may estimate the instinct which directs him, is, to say the least, a dangerous character. The different species of disease are so intimately blended with each other, and the phenomena of morbid actions are so varied, and so flickering, that in medicine, more than in any other instance, first impressions ought to be received with hesitation and suspicion. Occurring to a physician of extensive experience, indeed, these impressions are certainly possessed of no ordinary value; but when it is considered that they are only valuable, even in that case, as they are accurate, and accurate only as they have been corrected by frequent mistakes, and chastened by repeated observation, it is obvious that they cannot be the more worthy in every instance of an implicit belief. An experienced eye, from the appearance simply of the countenance, may detect a case of colic in the crowded wards of an hospital, and one conversant with disease, will seldom be deceived in phthisis or gangrene. But who, on this account, will

be the more ready to believe that there are not combinations of disease which may baffle the most discerning?

It is the abuse, however, of this instinctive quality of distinguishing disease, rather than the quality itself, which I would wish to deprecate here. Whether it be from flattering our self-love, or indulging our propensity to indolence, that is a vice which we are almost certain of being beset with at some period of our career; and whether we view it as it affects our practice, or militates against our happiness, it is one which we cannot be over anxious to correct. From an overweening reliance on this quality of detecting disease at a glance, we are apt, in the first years of our practice, to commit errors which a whole lifetime will not afterwards be able to compensate for; and from being frequently deceived, and nearly always unsuccessful, we are but too much disposed to brand our profession with uncertainty, and continue to labour in it with disgust. The physician who is fond of rating his attainments in this way highly, is almost always in danger either of forming a diagnosis decidedly erroneous, or of seeing the truth but dimly, and after much delay. The fatal consequences which must result from such mistakes as these to his patient, and the unpleasant feelings which they must give origin to in himself, can require no comment. The practical inference which I would deduce from them is simply, that, in the practice of medicine, we should never attach to first impressions more than a secondary importance, and ought always to be on our guard, lest what we think is a visus eruditus, be only a delusion occasioned by a limited and ill-directed course of observation.

The next cause which I would take notice of as being likely to occasion a false or imperfect diagnosis, is a bigoted attachment in physicians to some favourite hypothesis.

From a trial of this nature, I have known an intelligent practitioner discover symptoms of congestion of the brain in two thirds of his visiting list, and open the jugular vein of a patient, whose only complaint was the spleen. I have seen another extremely sharp-sighted in diseases of the liver, and a third who was famous at detecting a pox. An accoucheur has discovered hysteria in the spasms of a tetanic patient; and an advocate for the lancet has occasionally conceived a fit of hysteria to be one of apoplexy.

These extravagancies, were they not so highly dangerous in their consequences, might furnish abundant matter for amusing speculation. There is such a tendency in the human mind to fix on a principle which may be applicable to every exigency, and we possess, at the same time, so great a facility to external

impressions, that it must always be a matter of extreme difficulty to generalize correctly, or to prevent our opinions from being moulded on local and accidental circumstances. A physician who has received his first notions of practice in a tropical climate, or one who has been early conversant with the terrors of a lock hospital, cannot be expected to have many prepossessions in common with those who have been differently placed.—CAMERON was a married man of dissipated habits, and of a scrofulous disposition. There was an ulcer on the prepuce, with a white sloughing bottom, specked with little red eminences; the glands in each groin were swollen and painful. Had this man a pox? One infected with *syphilomania* would have said he had; while another more cautious in his diagnosis, or less fearful of venereal complaints, would have previously inquired, whether it might not simply be the effects of abrasion of the cuticle. The questions necessary to obtain this knowledge are obvious. He was, although dissipated, a married man, and might not therefore have been lately exposed to infection. He was of a scrofulous disposition, and might therefore be supposed peculiarly liable to have his glandular system affected by slight causes. This in Cameron was actually the case. A pledget, smeared in simple ointment, was applied to the ulcer; leeches were placed on the groins, and he speedily got well.—KERR was an old, ignorant, and very poor woman, who had formerly been the wife of a soldier. There was a deep, foul, phagedœnic ulcer in the fauces, another on the chin, and a third on the leg. These, particularly that on the tonsil, were spreading rapidly; her strength was sinking; and any uncertainty, from the delay it would occasion, might have been fatal in its consequences. It was a question, however, whether these ulcers arose from debility, or from syphilis? The evidence afforded by her character, her situation in life, and, I may add, by the appearance of the ulcers, was equally favourable to either opinion, and there was nothing wanting but the prejudices of the medical attendant to make it a case either of syphilis or of starvation. She had cinchona, wine, and a nutritious diet. The proper stimuli were applied to her sores, and she recovered.—LOUDON, a seaman, when abroad, had chancres on the penis, and a suppurating bubo in the right groin. He made no use of mercury till three months after infection; but from this period to the date of his application to the person under whose care I saw him placed, being an interval of more than a year, he had, although at sea, been almost constantly in a state of salivation. When he applied, there was a fistulous sore in the right groin, an excavated foul-looking ulcer of the size of a shilling on the back, another

much larger on the left palpebra and cheek; and the whole tonsil of the same side, with a portion of the velum, were also destroyed by ulceration. The nostrils and fauces were indeed become complete secreting surfaces, discharging immense quantities of purulent matter, and keeping up a constant state of irritation. There was also profuse ptyalism, circumscribed swellings on the tibia ulna and occiput, frequent inclination to cough, and extreme general debility. The question in this case was, Whether are these the effects of lues, or of mercury? It was decided in favour of the first. The blue pill was resumed; mercurial fumigations were applied to the ulcers; and as these did not seem sufficiently powerful in their influence, the sublimate was also given in solution. Bark, wine, and the mineral acids, with a nutritious diet, were also administered, and, along with the mercurials, persisted in for three weeks. At the end of this period, hemorrhage, to the amount of an English pint, took place from the lungs. The ulceration in the fauces now extended anteriorly to the opposite side of the uvula, and posteriorly to the edge of the right tonsil. Pieces of bone were occasionally discharged from the nostrils; the left eye ball was naked at one part; and his debility was now so alarming, as to threaten a speedy dissolution.

The sublimate was discontinued; ten drops of the tinct. of digitalis were given night and morning; and decoction of sarsaparilla, to the extent of two pounds daily, was ordered as common drink. Under this treatment his powers seemed gradually to recruit, his appetite improved, and the rapidity of the ulceration was checked. The sarsaparilla was continued in the same quantity for above a month, and his sores regularly dressed with the yellow wash and turpentine liniment. It is now a twelvemonth since he gave up the use of these medicines, and although his constitution is of course greatly shattered, there is perhaps little occasion to fear a renewal of his complaints.

I might here quote a variety of other cases which have fallen under my own observation, bearing immediately on the point, and proving, in as strong a manner as those which I have related, how apt we are to be influenced in our diagnosis by a limited hypothesis, or a peculiar cast of opinion; but as this would swell my paper to an inconvenient size, I shall proceed to notice some of the other causes which I have seen produce a similar effect.

Next then to the influence exerted by a peculiar mode of thinking, the existence of an epidemic in the immediate seat of our practice may be considered as the most probable cause of an erroneous diagnosis.

During the ravages of a pestilential fever, our fears respecting it become in general so great, and our reliance on shivering, nausea, &c. as certain diagnostics of it, is so very frequently warranted by the result, that it is not surprising though we should sometimes, in such emergencies, be hurried into the mistake of conceiving every case which presents itself with these symptoms as necessarily one of fever. When an alarm of this nature has taken possession of a community, how often do we witness the most improper cases committed to a fever ward? and when a young physician has been accustomed to grapple daily with an epidemic for a whole season, to mix with it in all its varieties, and to contemplate it in all its most terrible appearances, what is more probable than that his imagination becomes so excited, and his usual habits of observation and of thought so tainted by the scenes with which he is thus conversant, as totally to incapacitate him from forming either a cautious or an unbiassed opinion in matters which have no immediate relation to his present pursuits? Nephritis and small-pox have thus, at their commencement, been mistaken for biliary or typhous fever; and the remittent fever of children has more than once, from a similar cause, been treated as rubeola.

There is another way, however, in which epidemics, or rather the *causes* of epidemics, may affect the accuracy of our diagnosis. The experience of the physician has taught him to expect, that every particular season or year shall have its predominant disease, and the inquiries of more minute observers have proven, that, in every season, the minor or common diseases partake, more or less, of the character of that which happens to be predominant. Thus, if typhus be the ruling or epidemic disease, all the pyrexiæ of that year will assume, in a greater or less degree, the peculiarities of the typhoid type, while, on the other hand, if synocha has the ascendancy, the inflammatory character of the phlegmasiæ will be heightened, and the symptomatic fever of the other orders, also correspondent in its nature to that of the epidemic.

It cannot be correct, however, to say, that, because these changes in the feature of diseases generally observe that regularity of appearance which I have mentioned, they must, therefore, also stand to one another in the relation of causes and effects. It is surely more agreeable to fact, to consider them as *all* dependant on the operation of some more general cause, having the power at once to produce the epidemic, and also to give a peculiar character to the common diseases. Thus we see pulmonic complaints invariably to prevail in moist irregular winters, forming, in some situations, as on the sea-coast, more than a half of

the amount of cases among the infirm and the young, and insinuating themselves, to the great perplexity of the physician, as leading symptoms, into nearly two-thirds of the remainder.

Whatever may be the cause of epidemics, however, it is certain, that either an overstrained, or an imperfect degree of attention to their phenomena, is equally apt to confuse the diagnosis of the physician. In the one case, he carries his fears to an immoderate extent, and endangers his patient and his reputation by his practice and decision; while, in the other, his limited notions are as continually misleading him at the same hazard. I would, therefore, have every physician, particularly every *young* physician, before he pronounces on the nature of a case occurring during the prevalence of an epidemic, first to examine himself carefully whether he may not be about to decide, either rashly, from the impulse merely of his feelings, or inaccurately from not possessing a sufficient knowledge of his subject. From a neglect of this precaution, instead of diminishing, he may very probably increase the misery which surrounds him, and, by attending to it, he will, at all events, save himself a great deal of perplexity, and some self-recrimination.

Peculiarity of constitution in the sick, such as a disposition to hysteria, or to hypochondriasis, is another cause of the frequent mistakes which we fall into in forming a diagnosis.

A lady, affected with pain of side, has thus been sometimes treated with calomel and nitric acid; and a young man, with a quick pulse and a sense of confinement in the chest, occasioned merely by nervous excitement, has often been considered as consumptive. I have seen injections of olive oil pushed into the frontal sinus of a person affected with clavus hystericus, and bleeding *ad deliquium* practised on another who was supposed to labour under ileus. An hysteric girl, if bit by a dog, will exhibit many of the symptoms of hydrophobia; and another, who has been exposed to cold, will frequently take on the semblance of an epilepsy.

But these are not the only mistakes arising out of a disposition of this kind which the physician has to fear, for the exact converse of them all may also sometimes occur. Hysteria may not only assume the appearance of hepatitis, or of consumption, and thus cause us to destroy the constitutions of our patients by the use of improper medicines, but it may also amalgamate itself with these diseases when they are actually present, and thus prevent us from giving these medicines when they are really useful. The hysteric disease, when it affects the os frontis and its membrane, or, when it seizes on the stomach and

bowels, may not only be mistaken for the effects of insects in the frontal sinus, or considered as an instance of genuine ileus, but these affections may also sometimes be mistaken for it.

Instances of this kind might easily be accumulated; but surely those I have already given must sufficiently shew how likely our diagnosis of disease is to be perplexed by peculiarities of habit, and of how much importance it is to the physician to possess at all times a complete acquaintance with these in his patient. Without this knowledge, he will continually be at a loss to account for many of the appearances which so often present themselves to him, and must always, besides, be in danger of doing either too much or too little, when called upon to prescribe. It is thus that we see the female practice, in particular, of some physicians, so often at variance with the opinions of their humbler coadjutors; and, on the other hand, the most correct notions of others of the profession formed almost entirely on the suggestions of the patient or attendant. Hysteria, in all its varieties, is so much a disease of the imagination,—its history is so eminently one of bare conceptions,—and it occupies withal so considerable a part of the attention of every female, that, if it be proper, in any one case, to lay a great degree of stress on what is said to us by the friends or attendants of the sick, it becomes doubly incumbent on us when this disease is suspected to be in question.

The next cause which I shall take notice of as having a tendency to impress us with wrong notions of disease, arises out of the circumstance which I have just mentioned.

We will sometimes meet with a patient, who, from a habit of dabbling in medicine, or from a wish to impress us with a strong sense of the importance of his complaints, is wonderfully expert at perplexing his physician, by unmeaning or contradictory statements; and occasionally again we may encounter with another who is quite as successful, merely from the closeness or from the stupidity of his disposition. A young woman, while nursing a first child, or a mother who has often been deprived at an early period of her children, will be in continual apprehension of infantile diseases, and unless the medical attendant be either very cautious, or very well acquainted with the real appearance which these are wont to assume, he will also be not unfrequently carried away by their fears.

It is thus of importance not only to consider well what is said to us by our patients or their friends, but also to examine carefully whether what they say may not be dictated by prejudice or misconception. From not attending to this, the most

simple ailments may be often mistaken for important diseases, and the most active practice employed when little should be done.

I shall conclude this paper with a few remarks on one other cause, which, in more than a single instance, I have known to have had similar effects with those which I have already mentioned. I allude here to the vice which many of our profession fall into, of becoming engrossed in general pursuits, to the neglect of their medical studies. A young man of a warm spirited disposition will attend lectures, and read medical authors, while at college, in the most unremitting manner. At the expiration of two or three years, he conceives himself to possess a firm and an extensive grasp of every secret in medicine,—and forthwith he commences practice. New scenes are now opened to him, and new objects excite the energies of his mind. His medical studies are discontinued, and his only ambition now is to be a man of the world. Another person who has originally, perhaps, become a physician from necessity, or from chance, will indulge in the pleasures of the imagination; will be an enthusiast in every thing except his profession; and, skipping continually from one fanciful pursuit to another, will have little inclination for the severity of study, and constant observation, which medicine requires. One again who thinks nothing to be worthy of attention which is not capable of mathematical demonstration, will probably be as much disgusted at the uncertainty of medicine as the disciple of the Muses is appalled by its severity. When a person of this description happens then to be a physician, it will not be surprising if he should prefer the study of mathematics to that of medicine, and when either this or any other bias of the same kind acquires an undue ascendancy in our minds, it must be obvious how unfitted we will be to perform our duties in a proper manner.

In reflecting on the causes of a false diagnosis which I have enumerated in this paper, it will, I believe, be found, that, for the most part, they have little other origin than an imperfect or ill-directed education; and if it be true, that the practice of medicine is generally unsuccessful in the hands of such as study it improperly, what is to be expected from it when pursued by men who, although they make it their profession, do not study it at all? It is in vain that a physician possesses genius, or is a man of science. These qualities are extremely graceful in him, and could not well be spared, but they will avail him nothing at the bed-side of his patient, unless he possesses, at the same time, an ardour for observation, and a chastity of reasoning, which will interest him, on the one hand, in the most minute

occurrences of his practice, and preserve him, on the other, from bending these over much to particular views.

In attempting the solution of a case in medicine, we will be often deceived, and almost always perplexed in our conclusions; for, as we have little save analogy to guide us, and are ever in danger of being misled in the application even of this, it cannot be expected that medicine will have either the precision or the constancy of a regular science. But methinks the very disadvantages under which medicine labours, as a science, should operate on properly tempered minds, as so many additional inducements to cultivate an acquaintance with it. It is scarcely to be hoped that we will soon be able to arrange all the varieties of diseased action methodically, and according to universally acknowledged principles, but still I think that this has never been sufficiently tried, or long enough persevered in.

Irvine, 11th March 1819.

XI.

Case of a peculiar Eruptive Disease. By MARSHALL HALL, M. D. F. R. S. E. &c. of Nottingham.

THE eruptive disease about to be described, so remarkable by its *annular form, different hues, vesicular character,* and *general diffusion* over the surface, has not, I think, been distinctly noticed by practical writers; I have, therefore, thought the ensuing case not altogether devoid of novelty and interest, and perhaps not unworthy of a place in the Medical and Surgical Journal. The little patient was visited also by Dr Ballingall, author of an interesting work on the diseases of India.

PETER ENTWISTLE, aged four, first became languid and sick on the 23d of March 1818. On the 26th some red spots were observed on the face. On the 27th and 28th, spots appeared on the limbs and trunk of the body. On the 29th, other spots still continued to appear, whilst the former ones enlarged, and underwent the changes about to be particularized.

On the *first* day of eruption, the spots were red, flat, not hard, from two to three lines in diameter, and nearly circular.

On the *second* day of eruption, the spots enlarged, and either appeared elevated in their centre, or consisted of a deep red central spot, about a line and half in diameter, with a surrounding paler and rather elevated ring.

On the *third* day, the spots were of still greater diameter; the centre was more elevated, vesicular, contained a little whitish fluid, and was surrounded by a ring of deep redness, about a line and half in breadth; this ring was encircled by a second, rather elevated, and rather paler than the former, and of still greater breadth.

On the *fourth* day, the central vesicle was still more prominent, and contained a little opaque fluid; the ring surrounding it was very distinct, and the second ring still more elevated than before, and slightly vesicular; in one spot, under the chin, there was a large globate vesicle.

On the *fifth* day, the appearances of the eruption were very striking:—There was a central vesicular elevation, containing a whitish fluid, surrounded by a deep red ring, not vesicular; this ring was surrounded by another, lighter coloured, elevated, and manifestly vesicular; and this, lastly, by a third ring of redness, which vanished gradually into the natural colour of the skin. In some patches, the centre was of a deep-red, and the first ring vesicular. Some of these eruptions coalesced, giving an appearance of a still greater repetition of rings. Some of the central, and some of the annular vesicles, became still more elevated and distended, and manifested an appearance of larger globate vesicles, containing a transparent fluid. Some of the eruptions were nearly an inch in diameter; some of those which had coalesced were two inches in diameter; and others remained nearly of the diameter of the spots on their first appearance,—from two to three lines,—and were merely vesicular. All the spots co-existed, in their different stages, on this day. The eruption on the face continued of small diameter, and was vesicular, but little annulated; that on the arms was more annulated, and less vesicular; that on the thighs and legs was in patches of largest diameter, most numerous, most vesicular, and most annulated, and, indeed, possessed most of the character described above. There were few spots on the trunk of the body. There was little fever. The bowels were kept open by medicine.

On the *sixth* day, some of the spots on the face were still more in the form of globate vesicles, were from one to three lines in diameter, and presented little surrounding redness. Some spots on the scalp appeared as small opaque vesicles, without inflammation. Some of the spots on the arm had a central, opaque, elevated vesicle; others were circular patches of red, presenting a slightly vesicular character, and they were in general about four lines in diameter. On the thighs, knees, and legs, the rings before described had coalesced more or

less; in some parts they appeared as large, circular, or irregular, globate vesicles; in other parts there was a general appearance of vesicles, not distended, and in clusters; and in others, lastly, there were small, central, opaque, and elevated vesicles only. The little boy was better in general health; he sat up, appeared cheerful, and had some appetite.

On the *seventh* day, the appearance of distinct rings was less observed; the intervening rings, which were of the deeper red, having assumed irregularly the same vesicular character and appearance as those of the lighter hue. There was a little dryness of some of the vesicles on the face. The general health was still more improved.

On the *eighth* day, the eruption was irregularly formed into vesicles and bullæ. In some patches the centre seemed fixed, and the vesicle arose into a ring round it. In others, the whole formed one distended bulla. Some scabs which had formed on the face were removed. The eruption on the arms was declining. That on the legs remained as described.

On the *ninth* and *tenth* days, the appearance of distinct rings diminished still farther, the intervening redder rings assuming the colour and circular appearance of the paler ones, or the whole assuming, wholly or partially, the form of a bulla.

After this period, the vesicles burst, and irregular scabs formed. Some spots declined without becoming vesicular, or forming bullæ.

The *history* of this case coincides with that of herpes, of which genus this form of cutaneous affection may perhaps be considered as a variety; its diffusion connects it with the herpes phlyctenodes, and its form with herpes iris; in some parts it *resembled* the varicella globata.

Nottingham, August 20, 1819.

XII.

Case of a Dropsical Affection, successfully Treated by Bloodletting.

By George Dempster, Esq. Hospital Assistant to the Forces. Communicated by Dr Abercrombie.

Mr W. Stephenson, ætatis 45, 22d April 1819, master carpenter, complains of pain and difficulty of breathing, upon making the least exertion in walking, especially when at-

tempting to go up stairs; his countenance is bloated; lower extremities œdematous; pulse frequent, very irregular, and tremulous, often 130, intermitting three or four strokes within the minute; palpitation of the heart is at times so very great as to be both seen and heard; the carotids likewise pulsate strongly; sleep much disturbed by incubus and frightful dreams, accompanied with frequent startings. He cannot lie in the horizontal posture, or upon either side, from a sense of suffocation; he says he feels at times as if water was in his chest; is obliged to have his body elevated by means of pillows while in bed. Skin dry and harsh to the touch; tongue foul and parched; complains much of thirst. His urine is scanty and high-coloured, not coagulable; bowels torpid.

He attributes his complaint to having got wet, and to his being afterwards exposed to a current of cold air, immediately after which he felt oppression of the chest.

It was three weeks from the commencement of his attack when I was called in.

He was put under a course of the usual diuretics and purgatives, with the blue pill night and morning, from which, after a few days continuance, I found my patient derived no benefit whatever.

These medicines having failed, I determined upon trying the effects of blood-letting. Accordingly, on the morning of the 26th, ℥xxx. of blood were drawn from the arm with marked relief, for his breathing became more free, and his pulse, which was 130, and very tremulous, was reduced to 90, and soon became steady. In the afternoon of the same day, his breathing having become more oppressed, ℥xx. more were abstracted, after which he fell into a sound sleep, which lasted three hours.

H. 8vo. P M.—His breathing was free and easy, and he could lie on either side, or in the horizontal posture; urine had increased; pulse 90, full, and steady. To continue the diuretics and purgatives.

27th.—Had a good night's rest; breathing still easy; urine more copious and light-coloured, not coagulable; pulse 90, and firm; swelling somewhat less. The medicines to be continued; let a bandage be applied to the legs.

28th.—Sleep during the night disturbed; complains of pain in the back, with tumour in the upper extremities, more particularly in the hands; breathing oppressed; pulse 100, small, and soft; urine copious; frequent watery stools; swellings diminishing. Let a blister be applied from the nape of the neck to the lumbar vertebræ; and continue the other medicines, with a solution of the crystals of tartar for common drink.

29th.—The pain and oppression of breathing removed by the blister; the tremulous affection less violent; urine increased to lbs. vij. during 24 hours, not coagulable. Continue the medicines as before.

May 1st.—Since last report, his breathing has continued easy, and the tremulous affection entirely removed; recovering rapidly.

6th.—No complaint, except weakness.

Kingston, Jamaica, 9th May 1819.

XIII.

Cases of Aneurism. By Robert Liston, Member of the Royal Colleges of Surgeons of London and Edinburgh, Lecturer on Anatomy and Surgery, &c. &c. *(With an Engraving.)*

The following cases, excepting the last, have occurred to me within the last five or six weeks, together with a few other interesting ones, which I may afterwards present to the public.

I am induced to offer the first, both on account of the singularity of the circumstances attending it, as well as of the operation which was successfully performed for its cure. The other four cases, besides affording additional proof of the superior efficacy of the single ligature over all other plans in the securing of arteries, contain also some other points worthy of attention.

Case I.

Ossified Aneurismal Tumour of the Subscapular Artery.

Robert M'Nair, æt. 16, was admitted into the Royal Infirmary of Edinburgh on the 7th of November 1819, on account of a tumour over the left scapula. His case was the subject of a full consultation of the surgeons of that Institution. It being deemed by them imprudent, and not advisable, to attempt any operation, he was, after the application of leeches, dismissed as incurable at the end of eight days.

On the 15th, the young man was sent to me by my friend, Mr Walker, surgeon, to whom he had applied. On examination, I found the tumour very large, rendering him, as it were, hunch-backed; hard, and inelastic; firmly fixed to the left scapula, and extending from the spine over all its lower surface. It stretched into the axilla, likewise, to within half an inch of

Fig. I.

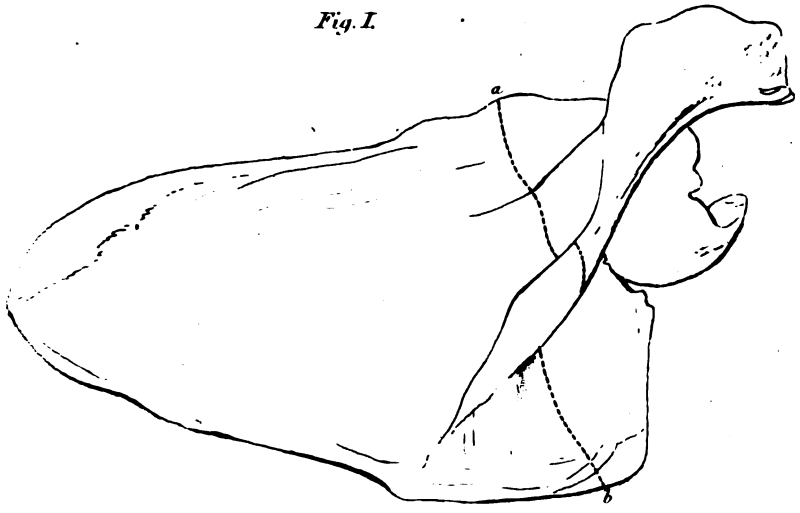


Fig. II.

Drawn & Engd by Wm D. Lizars Edin.

Published by A. Constable & Co. Edinburgh 1820.

the nerves and vessels, and a large branch (the subscapular) could be felt creeping along its under surface. The arm hung by his side, quite useless, and, from the wasting of the muscles, not more than half the size of the other. The uneasiness produced by the tumour was trifling, according to his account, when compared with the shooting and excruciating pains of the extremity. I was led to imagine that some bony spiculæ extended into the substance of the swelling, from feeling, in my attempts to move it independently of the scapula, a good deal of crepitation, as if of pieces giving way.

The disease was first perceived three months ago, immediately below the spine of the bone, about the size of a filbert, but of a flatter form, and had, of late, increased rapidly. About ten days before his admission into the Infirmary, it had been punctured by a surgeon in Kinross, when nothing but blood escaped.

It was evident from the rapid growth, and other circumstances attending the case, that the boy would soon be destroyed, unless an operation were attempted. On considering the case with my friend Dr Sanders, (whose able advice and assistance I have frequently experienced,) and examining it in all its relations, we were convinced—1*st*, By the freedom of respiration, that the ribs and intercostal muscles, of course the vital organs in the thorax, were sound; 2*dly*, That, though the tumour was firmly fixed to the scapula, yet that the bone was equally moveable as the one on the opposite side: and, as the vessels and nerves in the axilla were wholly unconnected with the disease, I immediately made up my mind to remove it; and, if it could not be avoided, to sacrifice the greater part of the scapula also.

Next day, accordingly, I proceeded to the operation, in a small badly-lighted room. I began by making an incision of a foot long at least, from the axilla to the lower and posterior part of the tumour. The latissimus dorsi was then cut across at about two inches from its insertion, so as to expose the inner edge of the swelling, with a view to tie the subscapular in the first instance. In this I was foiled, owing to its depth, as it passed under the lower edge of the tumour, out of the reach of my fingers. I then proceeded, as is my custom, in the extirpation of tumours, to dissect, where I expected vessels to enter from the supra-scapular. With this view, in detaching it from the spine of the scapula, I felt my finger and knife dip into the body of the tumour. This was attended with a profuse gush of coagula and florid blood. I immediately thrust my sponge into the cavity, so as nearly to command the hæmorrhagy. One of

my assistants, at the same time, tried to compress the subclavian, but to no purpose, as the shoulder and arm were much raised to facilitate the dissection in the axilla, which circumstance increased the difficulty of commanding the vessel on the left side. The patient, who had borne the operation well, exhausted by this, and the loss of blood from the very large vessels, supplying the tumour, divided in the former incisions, after some efforts to vomit, now dropped his head off the pillow, pale, cold, and almost lifeless. I then only became aware of the nature of the case, and saw that nothing but a bold stroke of the knife could save the boy from immediate death. Pulling out the sponge, therefore, with one rapid incision I completely separated the upper edge of the tumour, so as to expose its cavity; and, directed by the warm gush of blood, immediately secured with my finger a large vessel at the upper corner, which, with open mouth, was pouring its contents into the sac. With my right hand, I then cleared away the coagula, and dissecting under my finger, separated the great subscapular artery, so that one of my assistants could pass an aneurism needle under it at its origin from the axillary, and about an inch from the sac. After tying this, and two other large vessels, (fully the size of the ulnar,) which supplied the sac, I dissected off the tumour from the ribs without further hæmorrhagy, cutting with my knife the carious scapula and under part of the sac. After removing the tumour, I found it necessary to saw off the ragged and spongy part of the scapula, so as to leave only about a fourth part of that bone, containing the glenoid cavity, processes, and half of the spine. In this way, ten muscles * were either wholly or partially divided. The edges of the wound were then brought together, and the patient cautiously lifted into bed. At this time he was pale, almost insensible, and without any perceptible pulsation in the greater arteries through the integuments, though the ends of the vessels in the wound beat very forcibly. By the exhibition of stimuli, externally and internally, his pulse could by-and by be felt, though, on account of its quickness, it could not be counted. In the evening, however, it was at 90, and soft.

26th.—The wound is now completely filled up by healthy granulations, and contracting rapidly; discharge by no means profuse, nor has it been so; appetite good; pulse 80 and soft;

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* Latissimus Dorsi—Trapezius—Deltoides—Rhomboideus Major—Infraspinatus—Supraspinatus—Subscapularis—Teres Major—Teres Minor—Serratus Magnus.

all the functions natural. On the 23d, (only eight days from the operation,) he was so well, as to be out of bed in the forenoon for a considerable time. In the course of eight or ten days, he has every prospect of being enabled to return home quite well, and with considerable power in his arm, of which the pain has entirely ceased. The only apparent cause for alarm now, is the chance of hæmorrhage at the separation of the ligature, as it was impossible to include the vessel at a distance from the disease. The artery, however, was apparently sound. Whatever may be the result, certainly no blame can attach, seeing that the case has so far proved completely successful.

The tumour, though possessing some of the characteristics of aneurism, is quite unique in many points. The sac is composed of bony matter, containing little earth, and arranged in strata of short fibres pointing to the cavity. Its outer surface is smooth, and covered by a very dense membrane, whereas the inner, to which so equable a resistance was not afforded, is studded with projecting spiculæ. The lower part of the scapula lies in the middle of the sac, partly absorbed and covered by coagula, and the remains of the muscles. It would appear, that as absorption had proceeded from the bone, deposition had taken place in the sac. Very large vessels are perceived running on the surface of the tumour. For a more minute account, I must refer to the explanation of the engraving, which is a very faithful representation of the diseased mass removed. I am not aware that any account of this disease has been given. In looking over my note-book, however, I find a memorandum of a preparation I had examined in one of the Glasgow museums, (if I am not mistaken, that of Professor Jeffrey,) where there was a bony sac, about the size of an orange, situated on the outer ankle, and connected with both bones. Many pretty large arteries opened into it, but the trunks of the three principal vessels are stated to be unconnected with the tumour. Neither am I acquainted with any case in which the scapula has been removed by the knife of the surgeon, though there are on record one or two instances of recovery, after it had been torn off by machinery. The success attendant on the case now related may encourage surgeons to perform even bolder operations on the superior extremity; and from their attention being directed to the subject, other cases of this singular disease may be discovered, and its nature more accurately ascertained.

P. S. Dec. 7.—The wound on M'Nair's shoulder has opened a little at the upper angle, but is granulating and filling up rapidly from the bottom, concealing the ligatures, which are still firm,

but have been cut off close by their attachment. His health is quite re-established, and he returns home to-day.

Case II.

Popliteal Aneurism.

Sept. 30, 1819.—I was requested to see the subject of this case, Peter Barclay, a seaman, æt. 35, on account of an aneurism of the right ham. The tumour was not large, and had been noticed as the cause of lameness for three weeks, and was attributed to a sprain in raising a heavy cask in a ship's hold.

Oct. 1st.—I included the artery to day in a single ligature of small worked dentists' silk, leaving out the ends. After opening the sheath slightly with the point of my knife, considerable resistance was experienced in passing the aneurism needle behind the vessel. On this being overcome the wound was instantly filled with arterial blood. It was cleaned out repeatedly with the sponge and again filled. I then drew the ligature tight, when the bleeding totally ceased. It is probable that some branch had been divided as it comes off from the trunk by the point of the needle, which is as sharp as it can be made without a cutting edge, as my object has always been to detach the vessel no more than sufficient for the passage of the ligature. I was not so much concerned about the hæmorrhage as I should have been, had venous blood appeared, as I knew that I could easily remedy it by detaching the artery more, and applying two ligatures. I was present at one case, when, I believe, the femoral vein or a branch of it was wounded, and in which the sides of the opening were puckered up and tied, but very soon after the young man was carried off by bleeding. These cases should serve as cautions in the use of such a needle, which should be moved a little laterally if any resistance is felt. The incision was brought together by three stitches. Notwithstanding the delay occasioned by the hæmorrhagy, the whole operation, &c. did not occupy more than three minutes and a half. The ligature separated on the 22d day, though on the removal of it the wound could scarcely admit a pin's head. Eight days after the separation of the ligature, he had stretched the limb in getting out of bed, and considerable swelling about the wound supervened. Matter formed, which with a flow of blood came away suddenly in the night. From the idea that the artery had given way, he twisted a handkerchief round the limb with the handle of a spoon in lieu of tourniquet. I was the more alarmed at the idea of hæmorrhage in this stage of the case, as I had in one month witnessed the loss of two patients after the separation of the ligature. The first was a case of popliteal

aneurism, in which the artery had been secured by two ligatures and the vessel cut between. Ten days after their separation, when the wound was healed so as scarcely to admit a crow quill, bleeding came on in the middle of the night, and carried off the patient.

The other was a case in which the iliac was secured for inguinal aneurism by a single ligature. Eight days after its separation hæmorrhage began, and returned at intervals for four or five days till he died. No attempt was made to secure the bleeding vessel. In neither was examination of the parts allowed.

In the case in question, however, the wound healed up without further trouble, and the patient is moving about.

Case III.

Popliteal Aneurism.

Oct. 5, 1819.—I was called to the country to operate on the limb of Mr T. æt. 30. Twelve months before, he had noticed a pulsating tumour in the left ham, producing lameness, which he attributed to a strain in lifting a heavy weight up a flight of steps. A very intelligent surgeon, Mr Young of Dalkeith, to whom he applied, perfectly aware of the nature of the case, suggested the propriety of an operation. This advice however he neglected, and put himself under the care of a kind of veterinary surgeon, who applied turpentine, poultices, &c. The swelling now attained a very large size, and lost all the characteristics of aneurism. A lancet was (on this date) pushed into the most prominent part, when, after the escape of a few coagula, florid blood made its appearance. The wound was secured by a firm compress bandage, and a tourniquet tightly applied to the limb by his former adviser, who called upon me. The tumour and knee measured about two feet in circumference, the limb was immensely swelled, and much pained; the patient thin and emaciated, but prepared to undergo any operation. Considering that the limb would be in a much more favourable state for the ligature of the vessel, owing to the already existing obstruction to the circulation, and consequent enlargement of the anastomozing vessels, than for amputation, which was proposed, (and in fact I have seen this latter operation performed on account of an aneurismal tumour in the ham of a much smaller size,) and also that the securing of the vessel, in the first instance, did not afterwards preclude, if necessary, the removal of the limb, I decided on making the experiment, and accordingly proceeded to include the femoral artery in a ligature, as in the former case. The patient suffered but little, as the lifting of him to the light, removal of the tourniquet, operation, dressing, and

replacing him in bed, were completed within eight minutes. The ligature separated on the 17th day. In three weeks both the wound in the tumour and that on the thigh were cicatrized. The tumour from the time of the operation diminished rapidly, is now almost gone, and the patient begins again to enjoy the use of his limb.

Case IV.

Inguinal Aneurism.

Nov. 5, 1819.—Mr A. æt. 35, about five weeks ago, and after dancing, felt pain in the left groin, and rheumatic affection of the limb. Three weeks since, he noticed a swelling close to Poupart's ligament, which has gradually increased, and has now attained the size of a large lemon externally. It has been treated by an apothecary, who has applied blisters, &c. to the limb and tumour.

Next day, assisted by my friend, Dr Kellie, who had seen the case two days before, I secured with a single ligature the external iliac, as high as possible, by an incision almost parallel to the linea semilunaris. The different layers of muscles were divided by the knife, and with the hand unsupported, until the peritonæum was exposed by lifting a few fibres of the transversalis with the forceps. The wound was then dilated with a probe pointed bistoury, the peritonæum held aside, and the vessel tied. I am thus particular in mentioning the steps of the operation, as I know that the peritonæum has been wounded, and the viscera allowed to escape on the living body; indeed, I have seen such mistakes committed by those who ought to know better, in their attempts on the dead.

The patient bore the operation well; the ligature came away on the 16th day; and the wound is now (Nov. 25th) almost healed He has complained much less of pain, or coldness of the limb, than the two former patients. By the operation, he was immediately relieved from excruciating pain, stretching down the fore part of the thigh, referable to the pressure on the anterior crural nerve. The tumour has already almost completely disappeared.

Case V.

Curious Affection of the Head and Face, in which Ligature of the Left Carotid was had recourse to, but without success.

The following case I offer without any comment. The subject of it is still alive, and unrelieved; of course, I shall, with pleasure, attend to any suggestion regarding her. On June 20, 1817, I was requested by my particular friend, Mr Nasmyth, to see J. Cairns, æt. 24, in consultation with Drs Barclay,

Duncan junior, and himself. She had been afflicted with constant beating pain in the left cheek and upper jaw, along the alveolar processes, stretching to the throat, and, indeed, involving the whole head. The pain was without respite, and so violent, that she constantly supported her head, unable to use the slightest exertion, and sleeping only when completely exhausted. Of course, all kinds of remedies had been tried, external and internal. The antrum had been perforated eighteen months before, and that very extensively, by Mr N.; but neither matter nor tumour could be detected. At one period, this gentleman (thoroughly acquainted with the disorders of the mouth, &c.) thought that he had discovered the cause of all the mischief in a canine tooth, growing across the palate; but, after the extraction of this, no relief whatever was obtained. In my examination of the parts, finding no cause of irritation of any kind, I, partly for the sake of experiment, put my thumb on the left carotid. She immediately exclaimed, that she was quite relieved; and that, if the pressure were continued, she would be enabled to go about her usual occupation. The same effect was produced in the repeated trials of the gentlemen present. As every plan had failed, it was deemed, in consultation, quite justifiable to produce a permanent obstruction to the flow of blood in the artery. Accordingly, on the 22d, I passed a small single ligature under the vessel, immediately below the omo-hyoideus. Neither the vein nor the nerves produced any delay or difficulty in the operation, which was done in a very few minutes. The latter organs were separated, and the sheath opened with the point of the knife. I may here mention, that for an instant I gave up the dissection, after dividing the superficial parts, and tried, as is recommended by some surgeons, to separate the sheath, &c. with the handle of the knife. This plan, however, in any circumstances, I should never again be prevailed upon to attempt. Neither would I be inclined to use a directory for dividing the layers upon. In this, and every case since, I have uniformly made a fair and clean dissection of the parts, in any delicate step lifting the coverings with the common dissecting forceps. This instrument, from being more accustomed to its use, has always served me instead of a tenaculum, and in many cases of a directory also.

The wound was healed on the removal of the dressing, excepting where the ligature (which was separated on the 22d day) was left out. For some time, the pains were much relieved; but since then, I understand, they have returned with considerable violence. After the operation, she complained much of pain in

the back of the head and neck, probably from the dilatation of the vertebral arteries.

Edinburgh, 56, *George Street*, 1819.

Explanation of the Plate.

Fig. I.

Is the representation of a sound scapula, much reduced, the dotted line on which, *a. b.*, marks out where the bone was sawn across after the removal of the tumour.

Fig. II.

Exhibits the inner surface of the sac, which pointed to the ribs. The figure is about a third of the original size.

a. a. a. The bony or cartilaginous sac, the fibres of which are seen pointing towards its centre.

b. The cavity, which was filled with fluid blood. The bony projections or spiculæ are seen, as it were, crystallized at this part.

c. Coagulum, evidently organized, embracing towards the letter

d. on the left, a portion of thin half-absorbed scapula.

d. On the right hand, is the sawn edge of the thick part of the bone. This letter, together with

e. f. marks out a portion of the scapula and sac, which has been placed in its situation to complete the appearance of the tumour, though it was sawn off separately, after the removal of the latter.

A number of pretty large pieces betwixt *e.* and *g.* were also cut off with the bone forceps.

g. Marks out the place where the subscapular artery entered the tumour.

h. The strong membrane covering the sac, with the fibres of the muscles attached to its outer surface.

The portion of cyst betwixt *h.* and *a.* was that which occupied the situation at the root of the acromion; and, when it was first opened,

g. on Fig. II. occupied nearly the situation of *a.* on Fig. I.

PART II.

CRITICAL ANALYSIS.

I.

A Short Account of some of the Principal Hospitals of France, Italy, Switzerland, and the Netherlands, with Remarks upon the Climate and Diseases of those Countries. By H. W. Carter, M. D. F. R. S. Ed. One of Dr Radcliffe's Travelling Fellows from the University of Oxford. 8vo. London, 1819. pp. 255. Underwood.

Some months since, when a work on the principal hospitals of Europe, by a travelling Fellow of Oxford, was announced among the forthcoming publications of the day, we anticipated great pleasure and instruction from the perusal. Perhaps this anticipation may have led us to form a less favourable opinion of the execution of Dr Carter's volume than to others it may appear to deserve. We readily confess that we have been disappointed,—and, in order that we may put our readers in possession of the nature and extent of our disappointment, we shall, in the course of this article, state what we conceive should be the plan of a book with a title such as that before us;—we shall then give some specimens of the present performance. We do not expect the scrupulous minuteness of Tenon, which no person can pretend to without local advantages entirely out of the reach of a casual visitor; nor do we look for those architectural details of Sylvester, which a professed engineer can alone give;—but we assuredly expect information more ample than we can easily procure from gazetteers and guides; excellent and useful performances in their own way, but, we humbly apprehend, more proper for perusal in an hotel or diligence than at second-hand in a medical book. A great proportion of Dr Carter's information savours strongly of these sources, and, indeed, he con-

fesses, that his sketch of the climate and diseases of Lille is chiefly taken from the "Guide des Etrangers,"—"one of the best books of the kind," says the Doctor, "I have ever met with." The justice of this eulogium we shall not dispute; for we are convinced, that, from the specimens of these handy little vade mecums to be found in most large towns, together with some help from the published regulations of their hospitals, we could, with great facility, compose a good shewy octavo, which would not suffer in a comparison with Dr Carter's, without ever stirring from our own firesides.

Dr Carter had before him, if not perfect models, at least very respectable examples of medical travels in the works of Hunczovski, Loder, André, Flajani, and Dr Joseph Frank; in the journey to London of Philibert Roux, or the interesting sketches of Mr Cross. In their publications on the hospitals of Wilna, Munich, and Wurtzburg, we have had from Frank, Haeberl, and Thomann, as well as many natives of the countries through which Dr Carter travelled, valuable examples of succinct and detailed histories of individual establishments. Some of these publications are in every body's hands, others cannot be supposed to be unknown to a fellow of an English college, although they are the productions of foreigners. In truth, it is principally in the English language, that there is any deficiency of works upon the hospitals of other countries; and a publication which should completely fulfil the promises of our author's title-page, is yet a desideratum in British medical literature. This is the more to be lamented, because little is required in the composition, except ordinary attention; a faithful detail of what the writer may have seen himself; and some industry and discrimination in collecting or abridging from legitimate sources, those facts and statements for which he must trust to others. But we shall now specify some of the heads of information which we conceive such a work should embrace.

We should be grateful to that author who, after giving us a brief memoir on the medical topography of a place, should inform us of the site, size, and plan of its hospital, the number and accommodation of the wards, with the methods of ventilating, warming, and cleansing them; the plans for separating and classifying the patients, their numbers, and the measures pursued for obviating or checking contagious diseases among them; the materials and arrangement of their beds, bedding, and other articles of furniture; the means of collecting and conveying the sick to the hospital, with a statement of the obstacles or facilities of access to the building itself, as well as to its various apartments. We should expect an account of the

plan, extent, and arrangement of the kitchens, baths, and wash-houses, and of their supply of cold and hot water, and steam, together with a detail of all contrivances for the abridgment of labour; the diminution of the consumption of fuel; and the increase of the nutritive quality of the food, or its fair, regular, and comfortable distribution. Knowing, as we do, how much the individual comforts of the sick, and the general good order of an hospital, depend on the water-closets or "latrines," we should attach great importance to the description of their site, size, and actual state, the extent of their supply of water, air, and light, and the measures adopted for removing the soil, or preventing the diffusion of unpleasant and unhealthy effluvia. To all this information on the immediate accommodations for the sick, we should wish to be added an account of the storehouses and offices of every description; the airing ground for the convalescents; the places of reception for the dead, with the modes of disposing of the bodies, &c. &c. We should expect also a statement of the rank, number, salaries, and duties of the various officers of the establishment, whether medical, surgical, or purveying, with an enumeration of the servants of different classes, their wages, the proportion which they bear to the sick, and the respective duties which they perform. In short, we should wish for information on every point subservient or preparatory to the grand objects of administering food, medicine, and surgical assistance.

We should then be prepared for a view of the mode of carrying on the medical, surgical, pharmaceutical, and purveying duties, which would naturally lead us to the history of new or peculiar practices or operations; accounts of new remedies; details of the diet, ordinary and extraordinary, administration of wine, and other cordials, &c. The sources of revenue from which these wants are supplied should be specially enumerated, and, from all these premises, we should have no difficulty in entering into a view of the expences of the establishment. The nature of the records and annals kept at the hospital should be stated to us, and, from these, interesting information on comparative mortality, prevalence of disease, and peculiar epidemics, originating either from within or without, might be afforded; as well as satisfactory notices on every other point medical, statistical, or financial. If the hospital has a school or museum attached to it, or in its neighbourhood, we should expect some information upon these heads, which might be rendered more valuable by biographical sketches of such celebrated men, as either flourish at the time, or had formerly contributed to the celebrity of

the institution. Finally, we conceive it to be the duty of every writer who gives an account of the state of medicine, or the medical establishments of any country, to consult every accessible source of information; and he will greatly enhance the value of his labours, if, to his account of each town, hospital, or school, he appends a catalogue of the books in which information may be found, and this whether he may have read them or not. Literary honesty will certainly require that he should candidly acknowledge where he may have largely borrowed; but no man need be ashamed of confessing, that he has heard and read of more books than are within his reach, and which he consequently never has, or perhaps never can peruse.

This is a rough and imperfect outline of what we should expect in a book professedly written on hospitals, but which, of course, the peculiar views, opportunities, or abilities of the author, would lead him to fill up or curtail, according to circumstances. As a basis, however, we conceive that this plan, under some modification or other, is indispensable towards affording really useful information on the subject. That it is far from impracticable, or even peculiarly difficult in the execution, we know; since, under the excellent discipline now established in our military hospitals, every surgeon of a regiment throughout the empire is called upon for a document somewhat of this nature, on each change of quarters; documents which are lodged among the records of the army medical department, and may hereafter furnish invaluable materials to the profession at large.

We should now inquire how far Dr Carter has acted upon this or any other plan, which might have served to embody for us useful information on the state of the hospitals in the various parts of Europe in which he has travelled. After minutely examining his work, we confess our inability to discover the precise plan upon which he has composed it:—and, indeed, we much doubt whether he has adopted any; for his notices are singularly vague, irregular, and disjointed:—they are apparently copied at random from his pocket-book, or hastily extracted from his travelling directory, with very little pains in the selection. So long, however, as we are offered information, we are willing to accept it, from whatever source it may be derived, but our facility, in this respect, shall not induce us to surrender our privilege of examining its value.

In the first place, we have to complain of the extreme shortness of Dr Carter's articles. In his table of contents, we are promised information on the hospitals of Paris, Lyons, Geneva, Lausanne, Berne, Nice, Turin, Milan, Padua, Florence, Pisa, Leghorn,

Rome, Naples, Sicily, Lisbon, Lille, Brussels, Antwerp, Ghent, Amsterdam, and Leyden. We had some forebodings, that a book of the size of Dr Carter's (pp. 255) could not contain all the interesting matter that the bare mention of some of these places suggested; but, on further examination, we became satisfied, that, in his mode of dispatching business, he might have added to his catalogue all the hospital establishments in the German and Russian empires, together with those of the minor states, without exceeding the bounds of a moderate octavo. To some of the places enumerated, and those too among the most important, as Milan, Pisa, and Padua, he allows a page, a page and a half, or three pages; some he dismisses in fourteen lines—Lausanne, for example;—there are others, on the hospitals of which he scarcely expends as many words;—and others, again, as those of Naples, where he candidly confesses to us that he has nothing whatever to say.

Paris, one would suppose, might have furnished materials for something interesting; and, as every thing connected with its medical establishments is open to visitors, or has been described over and over again, if the Doctor had nothing original, he might surely have gleaned something from the works or the conversation of others. In Paris, or its immediate vicinity, there are 18 or 19 hospitals; beside these, there is L'Ecole de Santé, founded for the education of hospital surgeons, especially for the army and navy; L'Ecole de Medecine, the only establishment in Paris for granting degrees in medicine and surgery; and L'Ecole de Pharmacie, for the education of apothecaries: there is also the Jardin des Plantes, the College de France, and many other literary institutions, collections, and museums, connected with the study of medicine, an account of which would profitably and amply fill two volumes;—Dr Carter, with characteristic brevity, finishes all he has to say of the French metropolis in a little more than two sheets. He mentions only L'Hotel Dieu, La Charite, La Salpetriere, and some of the Maisons de Santé kept by private practitioners for lunatics and other patients who are in circumstances to pay for their accommodation; and of the principal school of physic, "L'Ecole de Medecine," his communications are nearly as laconic, and not more instructive, than we should expect from a good modern gazetteer. To those who have read Tenon on the Hospitals of Paris, as they stood before the Revolution, or the "Rapports faits au conseil general des Hospices civiles de Paris," about three years ago, or the Sketches of Mr Cross, published in our own country, the scantiness of information to be derived from the present author will appear not only provoking, but altogether unaccountable.

Prepared as we were for meagre details by his account of Paris, we were severely disappointed when we turned to the chapter on Milan. Milan, which contains one of the largest and most splendid hospitals in Europe, and which boasts of several eminent practitioners, remarkable for their attainments and their industry, is hurried over in three scanty pages. Few physicians conversant in the literature of other countries are ignorant of the name of Locatelli, the warm patron of blood-letting in fever; or of Giannini, the respectable advocate for the employment of cold water in certain stages of the same disease; or of Sacco, the apostle of vaccination in Italy, and who had very nearly been its martyr also.* Three more interesting subjects can scarcely be suggested to the British physician, but Dr Carter never mentions, nor even hints at them. It struck us also as not a little singular, that while Dr C. was at Milan, only a drive of twenty miles from Pavia, he should not have given some account of that far famed seat of learning, where Volta, Scopoli, Spallanzani, Scarpa, and other celebrated men, have so ardently exerted themselves for the benefit of science in general, and of medicine and surgery in particular. He either did not visit that city, or found nothing interesting, for he has not even mentioned it. Neither does he name Bologna, through which he must have passed, if he travelled between Florence and Padua.

The account of Pisa is comprised in two pages; it would take up a greater space to give a bare enumeration of his omissions under that head, than he has bestowed upon the entire article.

On Padua,—"alas for Padua,"—he expends fifty lines. Now we shall not quarrel with Dr C. for not having described the botanic garden, the most remarkable in Italy; nor for having left unnoticed that school of anatomy,—interesting to every man who recollects, that it was there the illustrious Morgagni performed many of those dissections which will hand down his name to posterity, as one of the most indefatigable contributors to our profession; still less shall we accuse him for omitting any hint of the fine series of dissected mollusca of the Adriatic Sea, and other objects of natural history to be met with there,—because neither botany, anatomy, nor zoology, form any part of the subjects mentioned in his title-page. But when

* He was nearly stoned to death by the mob in one of his excursions for the promotion of vaccination.

Dr Carter, in describing the hospital, employs merely the three words, "large and commodious," and when he does not give even one syllable on the climate or diseases,—we leave it to his own decision, whether we have not some right to complain of a breach of promise. There are two works, each nearly as large as Dr Carter's, written on the topography and regulation of this hospital, by Comparetti; and there is a series of clinical reports from the pens of Brera and Dall' Oste, embracing almost every thing worth knowing, both medical and financial. Had our author given us a good abridgment of either, or even if he had given the titles of the works in a note, we should have been in some degree satisfied; but he has not done this, and we are left to gather our information as we may. Fortunately for those interested in the subject, there is no want of materials. *

We turned from the venerable universities of Italy to that of Leyden, with our hopes greatly depressed, and, accordingly, we found, that somewhat more than the space allotted to Milan serves to convey to us all the information concerning that respected seat of learning, where, for so long a period, Boerhaave gave laws to physic. The state of the civil and military hospitals; the clinical lectures; the anatomical museum and theatre; the museum of natural history; and the noble botanic garden, rich in the plants of various countries, are all treated of within the compass of four pages. What chiefly attracted the Doctor's attention in the latter were "two trees planted by Boerhaave." This may possibly have been the case; but to botanists some intelligence of the palm raised from seed in the open air, by the celebrated Clusius, would have been much more interesting. If in existence, it must now be upwards of two hundred years old. This very tree, and the pot in which it grows, are figured by Boerhaave in the frontispiece to his index of the Leyden Garden, as has been remarked by Sir J. E. Smith, in his very interesting Tour on the Continent,—a work which we can with great confidence recommend to future medical and botanical travellers. †

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* We subjoin the titles of the above named works. Saggio della Scuola Clinica nello Spedale di Padova. Riscontro Clinico nel nuovo Spedale. Regolamenti Medico-Pratici di Andrea Comparetti, Padova, 1793 and 1799. Prospetto Clinico dell' anno scolastico, 1815-16, dal V. L. Brera, compilato dal Pietro Dall' Oste, Padova 1816. This work is continued. We have the reports down to 1817. There are also by Brera, the Prospetti Clinici di sei anni scolastici col Riassunto Sessenale, from 1810 to 1815 inclusive. Padova, 1816.

† A Sketch of a Tour on the Continent, by James Edward Smith, M. D. F.R.S. 3 vols. 8vo. Vid. Vol. I, p. 11. Some of his remarks on medical subjects

Next to the dwarfish brevity of his articles, we have to complain of the want of specific information on points of considerable interest. Thus, he states to us in general terms, that the wards of one hospital are commodious and well ventilated, and that the rules of another are good; but he never gives particulars, nor does he define what he understands by good accommodations or good regulations. Many persons imagine, provided a ward has abundance of windows, and these windows are kept open, that it is well ventilated. We, on the contrary, understand by good ventilation, that disposition of the windows which ensures a speedy exit to the heated and vitiated air, and a constant and uniform admission of the fresh and uncontaminated atmosphere, with the least possible exposure of the sick to currents. This is insured in the most simple way, by windows or air holes opening at both the upper and lower parts of the wards, close to the ceiling and the floors. Some people imagine, that to rub the pewter utensils, until they shine like silver, and then to range them in military array, to be looked at, but not to be used, implies the very acme of cleanliness and good order. We, however, conceive, that to keep every article in its own place, appropriated to its own purpose, and free from every thing offensive or disgusting, is quite a sufficient proof of neatness and good order in acute wards. In convalescent wards, indeed, the patients may be advantageously employed in various works subservient to neatness, and even to show.

When Dr Carter mentions particulars, it is often done in such a manner as to excite our curiosity, without at all contributing to its gratification. Thus, he tells us, that in the kitchen of the hospital of St John, at Turin, "there were several ingenious contrivances for saving time and labour, and rendering fewer servants necessary." We were much pleased with this, and we were in expectation of having some account of these useful inventions. All that we hear of them further is, "that one of them was for raising provisions into the wards, and it was certainly calculated to save a good deal of trouble."

But while he is so provokingly barren on subjects of real importance, he finds room for such pieces of intelligence as the following. "The hospital of Santa Maria Nuova, at Florence, was built by Folco Portimari in the year 1287. The façade

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are most pertinent, and those on the advantages of medical travelling particularly so. Vol. III. p. 178.

was commenced by Buontalenti, a celebrated architect, in 1611, and finished by Giulio Parigi." In the same strain, we are informed, that "The Santo Spirito at Rome was founded with the church in 1198, and has been repaired and enlarged by several Popes, especially by Alexander the 7th, Benedict the 14th, and Pius the 6th. It is situated in that part of Rome beyond the Tiber, which has received the name of Citta Leonina, from its having been surrounded by a wall by Leo 4th." Did all this serve as preface to any thing in the shape of medical information, its inanity would in some degree be redeemed; but, alas! it only ekes out the page, without enhancing its value. In the two cases now before us, it is inexcusable, because a voluminous account of the hospital of Santa Maria, and St Bonifacio, has been published, from which surely might have been extracted, details of much more importance than the names of the different architects.* In the case of Rome, no one is ignorant of the topographical descriptions of Baglivi and Lancisi; and there is a most interesting modern work published by De Matthæis, giving an account of the clinical school and hospital of Santo Spirito. No less than three papers on the medical topography of Lisle are now before us,† and doubtless many more are extant, but Dr Carter prefers the "Guide des Etrangers." He takes his account of the climate and diseases from it, and, accordingly, among other matters of equal value, we are favoured with the very important intelligence, that, in addition to other good things, "the country people about Lisle are in the habit of eating bread and butter, and new cheese, early in the morning, and between dinner and supper," &c. &c.

Another very striking deficiency is the neglect of useful dates and references. We are left in uncertainty as to the periods at which several of his visits were made. He was at Paris in 1816, at Geneva, and in some parts of Italy, between 1814 and 1818, and in Portugal in 1812; but we are obliged to guess at what period he visited, or how long he remained in other places. His references to books, from which we might draw more ample information, are remarkably scanty, and when they are mentioned, it is not in a satisfactory manner. Thus, for instance, under the article Lisbon, he refers to a memoir of Dr Bacta on the epidemic fever of 1810-11, but where to be found, or

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* Regolamenti dei regi spedali di Santa Maria nuova e St Bonifacio, di Marco Covoni Girolamo. 4to, Firenz, 1789. 416 pages.

† Hautesierck, Recueil des Observations, Tom. I. De Horne, Journal de Medecine Militaire, Tom. IV. Journal de Medecine, Tom. VII.

whether in the English or Portuguese languages, he does not tell us.

But we are tired of finding general faults; we shall, therefore, examine some of the individual articles. Wherever we can glean any thing like useful information or suggestion, we shall give full credit to the author, and when we can supply either upon our own authority, we shall do it to make some amends to our readers. Before commencing this course, however, we should inform them, that the present work was not intended as a separate one, but was meant to be incorporated with a larger and more general publication; indeed, the author, in his preface, expresses his doubts of the fitness of his observations to meet the public eye as an independent volume,—doubts which entirely coincide with our deliberate opinion.

We are sorry to find, by Dr C.'s remarks on Geneva, that the hospital of that intellectual city is in debt, but how contracted we know not, although nothing could have been more easy than to procure, from the liberal physicians who attend it, copies of the annual abstracts of receipt and expenditure, which are published for the information of the inhabitants. In 1815, Dr C. tells us, that the deficit was nearly 47,000 florins; in 1816, by a rise in the rents of houses, &c. belonging to the hospital, the deficiency was not quite 18,000; in that year, the revenue was L. 11,119 Sterling. We must not suppose that the revenue is all spent on the patients in the house; the out-patients also are supplied with medicine and money, and a trifling salary is paid to the medical officers, which our author states at about L. 20. The committee for conducting the affairs of the hospital, he tells us, consists of a President, Vice-President, Treasurer, Secretary, and fifteen members. The medical establishment consists of one physician and one surgeon for the house, and two physicians and one surgeon for the town patients. The hospital can contain 120 patients, (besides soldiers.) The average number in the house is about 80; the disbursements for the house in 1816 were 175,881 florins; while for the out-patients there were expended 352,550. The hospital he states to be clean and well ventilated. We understand, however, that the woollen curtains, which formerly were very common in hospitals, still remain to some of the beds at Geneva, which must, in such a situation, be a serious impediment to ventilation and cleanliness.

Dr C. mentions, in terms of just commendation, the soup-kitchens established during the winter of 1817, but, as usual, he omits particulars. Our readers who feel an interest in such charitable institutions, will find an account of that at Geneva, in a paper by Dr De Roches, " Sur l'etablissement de soupes à la

Rumford," in the Bibliotheque Universelle, Tom. IV. for 1817. Besides these soup-kitchens, there were two other establishments at Geneva, for the extraction of the nutritive part of bones. In one, under the direction of the ladies, the bones were simply boiled, and they furnished a jelly nutritive and portable, in so much as to be sent to the destitute poor of Savoy. The same bones were treated with dilute muriatic acid at another establishment under the direction of one of the learned societies; the phosphate of lime was dissolved; and the gelatine which was left behind was washed, sliced, and dried for home consumption, and for exportation to the neighbouring poor. Bones properly bruised were also delivered to them, and when boiled with or without herbs, they formed a good soup, and were employed even a second time for that purpose. Great praise appears to be due to Baron Eichthal of Munich for his investigations on the gelatine obtainable from bones, by boiling in a vessel on the principle of Papin's digester, and for his applying those substances which had hitherto been rejected as useless, to the furnishing an wholesome article of food to man. From his calculations, upwards of 58,000 quintals of bone were annually thrown away, or served as food to the dogs of Munich. From this quantity, there might have been furnished nearly 10,000 quintals of jelly, and 2000 of animal oil, worth, on a rough calculation, upwards of a million of florins. On a corrected calculation, it appears that 20,944 human beings could be furnished with one meal a day for an entire year, on 2300 quintals of gelatine. The establishment of Geneva seems to have owed some valuable hints to Baron Eichthal. An ingenious physician of Geneva, Dr Gosse, junior, made about this period some very interesting observations on the wild plants of Switzerland, which may be used as aliment. We cannot afford room to enlarge upon them, but we may observe, that plants hitherto supposed noxious, or medicinal only, as Colchicum autumnale, and Gentiana lutea, furnish a considerable proportion of alimentary matter under the treatment proposed by him. *

Dr Carter mentions the Lunatic Hospital of Geneva, and animadverts upon the injudicious management of the patients. It gives us much pleasure to be able to state, that a scientific friend of ours, a native of that city, is now preparing materials which may lead to the amelioration of establishments of this description.

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* Bibliotheque Universelle, Tom. V. 1817. p. 68 and 67.

Our author mentions a division of duties among the managing committee of the hospital, which strikes us as worthy of imitation; one undertakes the inspection of the linen, one of the clothes, &c.; and we suppose others of the food, &c. &c. We shall take the liberty of offering in this place some remarks upon two very important points of hospital arrangement, the linen and the food. Many persons unaccustomed to hospitals are apt to mistake blemishes, or indelible stains in the linen, for actual filth. In surgical wards, caustic is always productive of indelible stains; and where sores are washed by coloured vegetable tinctures or decoctions, as of bark for instance, the subsequent application of ointments, containing earthy or metallic salts, will act as mordaunts, and fix the colouring matter on the linen. Oils, mixed with earths or metallic matters, leave a stain most difficult to remove. Saturnine solutions, when dry, leave an ugly stain, almost impenetrable to water. Animal fluids, or the serum discharged from a blister, when dried on the linen, which, from the heat of the body, they very soon do, leave stains extremely difficult to get rid of. Thus, if the most scrupulously neat person scratches an accidental vesication through the stocking, a stain of a very refractory nature is left to mark the spot. Immediate immersion in cold water in some cases prevents this, but there is something still left for chemistry to determine on the subject of stains; some are indelibly fixed by cold water, and some by immersion in it are immediately removed; in some familiar instances one stain removes another; white wine, for instance, will remove the stain of Port; and salt will fix the stain of one wine, but, if thrown immediately on, will prevent the mark of another. Chaptal has given a process adopted at the Hotel Dieu for removing the old stains of animal matter. * We are informed that the following process is employed for that purpose at Guy's Hospital. The linen is first washed and boiled; the stains are then rubbed with soft soap and pearl ashes, and the article is tightly rolled up; it is kept thus rolled for a short time, and then it undergoes a thorough washing.

We have already alluded to the employment of bones, and we may mention, by the bye, that some of the nicest jellies of Paris and London are now prepared from them by the process with diluted muriatic acid. Calvi had long ago indicated the utility of employing bones in the preparation of soups for hospitals

* Annales de Chimie, Tom. XXXVIII. p. 291; vide also Chaptal's Chemistry, applied to Arts and Manufactures, Vol. III. p. 105.

by the adoption of Papin's digester; * and assuredly nothing can be more desirable than to procure wholesome food at a moderate rate. A special apparatus, however, is necessary for many of these processes, but we have seen a very simple preparation of a common article of food conduce much to its nutritive powers; it is employed in the military hospitals in Ireland, and consists in steeping all the oatmeal used in the hospital in cold water for some hours before subjecting it to heat. In these hospitals, also, thirteen ounces of raw beef, bone included, are allowed to produce half a pound of boiled beef without bone; a liberal allowance, but a necessary one, considering the loss by boiling. It would be well if the physician of an hospital would recollect this circumstance when he prescribes, and specify whether he means his patient to have the weight of meat which he orders, in its raw or its cooked state.

In some foreign hospitals there exist singular abuses on the subject of food. We recollect visiting the great hospital of San Juan de Dios at Cadiz some years since. On certain days, large trays of provisions of all kinds were sent in from rich families, and other charitable inhabitants of the city; on other days, the food has appeared to us extremely scanty, and too much left to the disposal of the servants of the hospital. We strongly suspect that that class of men, who, according to Le Sage, "grow rich by managing the affairs of the poor," is not yet extinct in the dominions of the Spanish monarch. At Milan, also, the hospital is on certain days crowded with the friends of the sick, who bring them all kinds of food, a practice which the physicians loudly complain of. At Vienna, there is a sort of tavern in the general hospital, ostensibly for the accommodation of the pupils, but where a patient, who can procure money, can doubtless, in spite of every regulation, procure improper food, and liquor also. Some foreign hospitals have butcheries attached to them. In an economical point of view, this may sometimes be desirable, but we confess we prefer the mode of getting in the meat from a distant slaughter-house.

Of the hospital of Berne we are told by our author that it is one of the best managed he ever saw, but his description of it is, nevertheless, one of the shortest in his book. By his account, we would be led to suppose that there was but one hospital at Berne;—we can only speak of Berne as it was in 1806;

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* Calvi, De Medicamentis pro Nosocomiis et jusculis parandis. Paris, 1764. 4to. The works of Parmentier and Count Rumford are well worth consulting on the subject of food.

—then, and we believe now, there were five hospitals: two in the town, and three at the distance of a mile and a half; one for lunatics, one for venereal patients, and one for incurables. Under the head Medical Intelligence, in our number for April 1809, Vol. V. p. 253, will be found a short, but not uninteresting sketch of these hospitals.

The account of Nice is one of the longest in the book, and contains some approximations to medical information, especially on the use of digitalis in consumption. It is carried to the enormous extent of scruple doses of the powder daily; and hourly doses of the infusion, to the quantity of half an ounce, are not unusual. Dr C. supposes that the digitalis of Nice is less powerful than that of Britain. Before we can admit the justice of this explanation, we would wish to ascertain the period at which the plant was gathered, the state of the leaves, mode of preparation, and whether any other article be administered along with it, or about the same period, which possibly may have the effect of counteracting its activity. We are the more anxious on this point, because Dr C. mentions in the same article, that, where cinchona bark has failed in the removal of intermittent, a combination of that medicine with the tartrate of antimony has been found efficacious. Now, we need scarcely remind our readers, that a decomposition takes place in this most unchemical mixture; and possibly the digitalis also may be decomposed by some unnoticed adjunct.

At Turin, the bread is prepared in a bakehouse attached to the establishment. To this the same objection of producing fetor and filth does not apply as to the butchery; though, on the whole, it is perhaps better to procure it out of the house. The government of the hospital of St John is confided to equal numbers of clergy and laymen, three of each; it can contain 550 patients. The medical establishment is six physicians, at a salary of between 200 and 300 franks per annum; two house physicians, and two surgeons. The servants are foundlings, and are paid eight or ten franks a month for the men, and six for the women, beside their clothing, lodging, and boarding. The revenues are 70,000 francs a year; the expence of each patient about a franc (10d.) a day. We have no account of the other hospitals, nor of the museum; indeed, our author does not even mention the latter, although one of the finest in Italy, under the direction of Professor Bonelli.

Dr Carter mentions what, indeed, could scarcely have escaped notice, that Padua, like the other universities of Italy, is falling into decay. This, he hints, is in some measure owing to the Austrian government. "Whether the House of

Austria adopts the best means to promote the happiness and dignity of its Italian dominions, is, indeed, a question which, I believe, (says Dr C.) both the natives of that country, and most travellers, will be inclined to answer in the negative." Now, the plain fact is, that the majority of scientific men in Italy use no delicacy in expressing their opinions on the subject, and are loud in their execrations of their present rulers. Anatomy, the basis of medical science, is ruined at Padua. The period of study, which was formerly indispensable, was three academic years; but the Austrians have reduced this period to one session of six months. The inevitable consequence of this injudicious measure is, that the study of anatomy has received a mortal blow; and it requires no great prophetic skill to foresee that pathology and therapeutics will shortly, if they do not even now, feel its deadly effects. To accelerate this deplorable event, the Austrian government has displaced several of the professors for various causes, principally free-masonry, or abolished their chairs, while they have, at the same time, diminished the salaries of those they have left. To crown all, nothing can be published in Italy, were it only a new proposal for phlebotomy, without being sent to Vienna, to undergo the examination of a censor, and receive his "Imprimatur." The measures and the habits of the Austrians furnish their sensitive and epigrammatic subjects with constant matter of discontent and ridicule. The Italian literati consider, or affect to consider, that the sun of science has set upon their universities since the Restoration. Hence, in allusion to some indulgences in food to which the German soldiers are said to be addicted, it was lately remarked by one of the professors, "Comment voulez-vous que des hommes qui mangent les chandelles, apportent des lumières?"

At Florence, the mortality is high in the hospital of Santa Maria Nuova. It is said to be about ten per cent.; "but I hope," adds the Doctor, "that this statement is not perfectly correct." We have not the smallest doubt that humanity has prompted this hope, but we apprehend that humanity will be found to have less to do with this subject than is generally supposed. The more severe the diseases, and the more violent the injuries, the greater will the mortality be of course; but, at the same time, it is evident that a greater mass of human misery is selected for alleviation. Before we make comparisons of the relative mortality of different hospitals, we should be well informed of the nature of the cases received into them. The assertion, "that the greater the mortality, the more useful the hospital," must obviously be taken under great limitations, and excluding altogether those hospitals where the deaths have been

occasioned by ignorance, neglect, or gross mal-administration, causes which we trust do not exist in any European establishment. In some of our own best hospitals we believe the mortality to be highest; and, at the Hotel Dieu, the mortality always kept pace with the improvements, and the extension of its real benefits. Between the years 9 and 11 of the republic, when the ameliorations were progressive, the mortality increased from one in seven to one in six, and in the early part of the latter year to one in four. The principle which this fact illustrates has been held by some eminent and humane physicians,—by Frank in Germany, and by Burserius in Italy. Upon the whole, numerous preliminary considerations are required, before an opinion can fairly be pronounced upon the mortality of any hospital, but our limits will not admit of discussing them here; we shall, therefore, turn to Dr Carter.

Whoever wishes for an account of the Museum of Florence need not open the present publication. Two pages, the matter of which makes no amends for the trouble of turning them over, contain the whole. Dr Carter tells us, that artists are at present employed upon a series of wax casts, illustrative of comparative anatomy. Some preparations of the brain have been mentioned to us as surprising specimens of the beauty and correctness of these preparations. We trust that the artists are better paid now than they formerly were. Under the old government, their allowance was so miserably small for themselves and their families, that famine and despair drove some of them to suicide. The present government, we are also informed, has abolished the professorships attached to the museum by the French. The result must be injurious, if not absolutely destructive, to that splendid collection.

Dr Carter is silent on the anatomical theatre, where some of Mascagni's celebrated preparations are still to be seen, although, as might have been expected from the hurried way in which they were prepared, in a decayed state. The present surgeon of Napoleon Bonaparte, Antomarchi, is preparing a splendid work on the subject, as an amusement for his leisure hours at St Helena. Dr Carter only mentions the hospitals of St Bonifacio and Santa Maria Nuova; he does not give us any account of an hospital which, we believe, was opened for fever cases some time ago, opposite the former. We should have much wished to know the rules and regulations adopted for it, and to have an opportunity of comparing them with those of similar establishments in England, and with our own at the Royal Infirmary and Queensberry House.

Dr Carter makes no mention of the kitchen of the hospital at

Florence, although it merits every attention, from the ingenuity with which it is fitted up, and for the saving of fuel which is produced by the structure of its grates. The flame is confined in an iron chamber, its intensity is moderated by dampers, and it is directed laterally round the pots, several of which it is made to heat at the same time, at an expence of only one third the quantity of fuel employed in ordinary kitchens. This invention is due to a Florentine, whose name we lament that we do not now recollect. It has been in use for several years, both at Florence and Sienna, (where also the chemical laboratory is fitted up on the same plan,) and it has certainly long preceded, if it did not suggest many of the inventions of more modern times. In the preparation of every species of food wherein vegetable and farinaceous matters are employed, which, by their gravity, fall to the bottom of the boiler, great risk is incurred, if the flame directly strikes upon that point, of producing an empyreumatic flavour by the burning of these matters. To prevent this, Count Rumford used a double bottomed boiler. In the common boiler, constant stirring becomes necessary, during which operation the steam escapes, carrying off with it much heat, and often diffusing a very faint and sickly smell throughout the hospital, besides affording a frequent opportunity to the servants of abstracting the contents, under the pretence of preserving them, a practice which seems to come peculiarly under the well known culinary proverb, "That too many cooks spoil the broth." But when the heat does not directly affect the bottom of the boiler, and the vegetables, &c. lie below the level of the flame, they are equally well boiled; the necessity of stirring is obviated; the broth may be placed under lock and key, and all chance of burning is effectually prevented. Dr Hope has fitted up the boilers in the Edinburgh Royal Infirmary on this very important principle.

Our author mentions the establishment for lunatics; and states, that, in one of the corridors, allotted for the men, there was a very bad smell, which seemed to argue some neglect in removing offensive matters from the cells. Dr Carter has omitted to mention the structure of these cells. They have each a privy within them, (as we find by notes taken on the spot,) a great nuisance, in our opinion, for such a place, except, possibly, for the fatuous or the furious, who must necessarily be confined. For the former unfortunate class of beings, however, the contrivance at Antwerp appears to us much better, where the torpid idiots are seated and secured to a chaise percé.

We cannot deny ourselves the pleasure of mentioning in this place the admirable contrivance of Mr Sylvester at the Derby Ge-

neral Hospital, for obviating the foul effluvia of the water-closets of that house. The particulars would be unintelligible without a plan, for which we must refer to his most ingenious work.* The seat, and the mode of supplying water, are on the same principles as in Bramah's ordinary apparatus; but the great superiority of Mr Sylvester's plan is, that the water-closets are freed from their fetor, without the least care of the person using them. On his entrance, he fills them with fresh air, while, by the motion of the door, which is rendered air-tight, the foul air is forced off through the roof. On his shutting the door, fresh air is left behind. Every one knows what nuisances these closets are when, from ignorance or neglect, any of the tubes are filled up with dirt or rags; or when, from frequent friction, or from chemical decomposition, occasioned by the action of the gases evolved from the feces, the metallic materials of the pans, or the wires communicating with the cisterns, have been injured. Every attempt, therefore, to improve them is an object of primary importance in an hospital. In the Derby Hospital just mentioned, the ingenuity of Mr Sylvester has been extended to almost all the other branches of domestic economy; and, by proper management, heated air and steam are made subservient to the important purposes of cooking, washing, drying, &c.

It is with great pleasure we can inform such of our readers as may have received a part of their medical education in our own Royal Infirmary, that, under the able management and direction of our ingenious Professor of Chemistry, Dr Hope, the agency of steam and heated air has been called into action in the kitchen, wash-house, and drying room of that building, as far as its original structure will at all permit.

Our author appears to have been twice at Rome; in 1814-15, and in the spring of 1818. We have in vain looked in his work for information on the subject of the new clinical school instituted by Pope Pius VII. There lies before us, however, the first volume of the work already alluded to, from which we are furnished with some particulars of this institution.† It appears that funds were wanting wherewith to found a new hospital, and therefore four wards of the Santo Spirito were given up for the purposes of the new establishment, while, at the same time, a surgical clinical school was founded in a part of the Hospital of St James for incurables, and

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* Philosophy of Domestic Economy, &c. By C. Sylvester, Engineer. 4to. Nottingham, 1819.

† Ratio Instituti Clinici Romani a primo ejus exordio ad Kal. Septembris 1816. Exposita a J de Matthæis. Romæ, 1816.

placed under the charge of Joseph Sisco. The ordinary physicians to the medical clinical school are Joseph Tagliabo and Joseph de Matthæis, who take the duty alternately for three months. Falcioni was assistant physician, and Flajani is assistant surgeon, and especially charged with the department of morbid anatomy. There are also two consulting physicians, Lupi and Morichini,—the only two medical men of Rome, by the bye, whose names are mentioned by Dr Carter. The name of the latter is familiar to English philosophers by his experiments on the magnetising power of the violet rays. The second volume of the above work has not reached us; it is to be edited by Tagliabo. The part already published is by De Matthæis, and contains an account of the clinical establishment of Santo Spirito, and a topographical account of Rome, together with some meteorological tables; tabular specimens of the practice; a table of admissions, discharges, and deaths; and a table of the hospital diet. The admissions from November 1815 to August 1816 were 227; the deaths for the same period, 24. The most fatal disease was pneumonia; six patients having died out of thirty affected with it. The most frequent forms of disease were intermittents and rheumatism; and we were sorry to see no fewer than nine cases of variola. Of syphilis three cases only were admitted.

The diet in this hospital will appear singular to the English physician. There are no less than seven different rates. The lowest is beef-broth ℥8, with the yolk of an egg, morning and evening. The full diet consists of no more than six ounces of bread, ten drams of gruel, three ounces of beef, and six of wine, morning and evening. The weight of the gruel is determined by that of the raw farinaceous material, which is varied daily. Extra allowance of bread, wine, egg, &c. are left to the discretion of the prescribing physician. The patients, on the day before their discharge, receive a double quantity of wine; they are then transferred in a wheel carriage to a convalescent hospital, where they are kept for three days before their final dismissal.

We by no means wish to recommend complicated or parsimonious systems of diet; but we cannot avoid expressing our conviction, that our British hospital dietary is too high in many instances, and that a most serious improvement might be made, both in a medical and financial point of view, by following the example of some foreign hospitals in their diet for acute cases. We may take some future opportunity of offering to our readers, comparative views of the established dietaries in some of the principal hospitals of England and the Continent; and we are much mistaken if we cannot prove that the diet in many

foreign hospitals is much better adapted to medical purposes than in our own, and without being nearly equal in expence.

The articles Leghorn and Naples, in addition to those already adverted to, close the Italian division of Dr Carter's work. Of Leghorn he speaks in high general terms of praise. It appears, from his account, that at the hospital for women, the patients who are able to work are obliged to spin, sew, &c. Half the produce of their labour goes to the establishment, and half to themselves, provided the work has been done for a private individual, but if for the hospital, they only receive one third. This plan he suggests for consideration in England. He mentions nothing of the hospitals of Naples. Indeed, twenty lines contain all he says in the whole article, but we take advantage of the opportunity of informing our readers, that we understand a new mode of employing mercury is just now in vogue at Naples. Every one recollects the unfortunate Dr Cirillo's employment of the saline preparations in ointment; his chief application was the corrosive sublimate applied to the soles of the feet; and it is stated by those who have used it to be very rapidly absorbed. Mr Torreillhe, of Strasburgh, proposed, in the year 1810, to rub the common ointment into the glans and prepuce in men, and to the labia in women. The absorption from these surfaces is astonishingly quick, and Mr Torreillhe conceives that he gains a great advantage, *by pursuing the enemy on the direct route.* In the new Neapolitan mode, a portion of ointment is placed in the axilla, whence, without any friction whatever, it is rapidly taken up into the constitution, according to the accounts we have received. We had prepared some few hints on Dr Quadris' new mode of treating bronchocele by seton, but as we can now refer to a full account of it by Dr Somerville, principal inspector of military hospitals, in the lately published volume (10th) of the Medico-Chirurgical Transactions, we shall not enlarge on the subject. We may mention, however, as an article of medical news, that the veteran Cotugno is still alive at Naples, and meditating another professional publication.

The countries or hospitals which have been occupied by our armies, are more dwelt on by Dr Carter, than those upon which we were more anxious for intelligence; and, accordingly, we find, that Sicily, Lisbon, Holland, and the Netherlands, are spoken of somewhat more diffusely than other places; indeed, more than half his volume is dedicated to them.

We find nothing upon which we shall detain our readers in the article on Sicily, which is now so well known, by means of the work of the late army physician, Irvine.

Under the head Lisbon, he speaks in succession of its hospitals, the state of medicine, the climate and the diseases. We shall not follow him on these well known subjects. He bears testimony to the immense improvements effected in the Portuguese hospitals, by the surgeons of the British army, and he speaks of those appropriated to the British themselves in terms of due praise. The hospital occupied by the royal artillery he characterizes as a model of neatness and good order, and he might, with equal justice, have extended the same eulogium to those occupied by every other branch of the service. We have visited them all, and we might compose an entire memoir on what we saw and what we thought; but the best practical illustration that we can give of the zeal and intelligence which directed the medical department of the Peninsular army, is the following fact. During the ten months from the siege of Burgos to the battle of Vittoria inclusive, the total sick and wounded which passed through the hospitals was 95,348. By the unremitting and well-directed exertions of Sir James M'Grigor, and the medical staff under his orders, the army took the field preparatory to the battle, with a sick list under 5000! For twenty successive days it marched towards the enemy, and in less than one month after it had defeated them, it mustered within *thirty men* as strong as before the action; *and this too without reinforcements from England!!** Whether the illustrious captain who led this favoured army, experienced in his own person the skill of his physicians, or whether, like the Roman conqueror,

"He had a fever when he was in Spain," †

we know not; but of this we are convinced, that no general, either of modern or ancient times, ever owed so much to those who conducted the medical concerns of his troops.

The hospitals of Leyden, Antwerp, Ghent, and Brussels, are spoken of by Dr Carter in terms of high praise. From our own knowledge we can corroborate his general testimony, and did our limits permit, we could furnish many interesting particulars, which have altogether escaped his attention.

His account of the clinical lectures at Ghent is the best thing in his book, and as we have so frequently had occasion to find fault, it is but fair that we should let Dr Carter speak for himself, where, in our opinion, he does it to any advantage.

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* See Guthrie on Gunshot Wounds, Preface. The ranks were recruited by convalescents.

† Julius Cæsar, *Act 1st, Scene 2d.*

"It is chiefly on account of the clinical lectures, that I have said any thing about this hospital. They are given every morning from eight to nine o'clock. How useful and instructive they are I can testify from experience, very short experience indeed, but such as was sufficient to enable me to appreciate their advantages, and to make me lament that they are not more attended to in our great hospitals at home. The patients for these lectures, who are selected out of the great mass, are distributed among such of the pupils as are sufficiently advanced to be able to examine them properly, and to prescribe for them in the absence of the physician. When the professor visits them, the several pupils are expected to give a clear account of the state of their patients, of the symptoms, &c. Their mistakes are corrected by the professor; and when I was at the hospital, he corrected them in so clear and decisive, yet, at the same time, so mild a manner; he so kindly commended those who had been assiduous, and so good naturedly rebuked those who had been remiss, that I am sure his pupils must be attached to him, and, if they are good for any thing, must profit by his instructions. *

"After each pupil had described the case assigned to him, and had mentioned what treatment he had adopted, the professor gave his sentiments upon it at some length, if he considered it an important one; in short, gave a real clinical lecture. At the time these notes were written, there happened to be some interesting cases in the hospital, for a fever, of a typhoid type, was prevailing epidemically in the town. I observed two or three recent cases, but the majority of those which I saw were convalescent. The treatment appeared to have been judicious and successful. Topical blood-letting seemed to have been very generally employed, and with marked benefit wherever there existed much affection of the head or of the chest. Affection of the chest, indeed, was a very common attendant of the fever which prevailed this year at Ghent. Typhus, with catarrhal symptoms, was marked upon several of the slates attached to the patients' beds." pp.198—201.

He gives more than usual information in his article Amsterdam. In the hospital of St Peters at that place, the wages of the men servants are 20d. those of the women 15d., with something extra for tea or coffee, and both sexes are boarded. In this hospital, there appears to be a weekly statement of the number of patients in the house, the admissions, discharges, and deaths. It is capable of containing 600 patients, by placing beds down the middle of the wards. This practice is extremely injudicious, and should never be had recourse to.

* "The present clinical professor is Dr Van Rotterdam, to whom I feel much indebted for acquainting me with the manner in which medical studies are conducted in the university of Ghent, and for putting me in the way of forming a judgment respecting them myself."

We may here observe, that it has been lately the practice at the Santo Spirito of Rome, by way of saving the funds, to crowd the patients into one ward, while many others are left empty. In 1818, there were actually *five* ranges of beds in some wards.

The foundations for lunatics appear to have excited an unusual degree of interest in our author, and to that of Amsterdam he assigns a larger space than to all the establishments of Milan, Padua, and Pisa, put together. The medical officers are two physicians and two surgeons; the number of lunatics, 50 men and 90 women; but of the diet, of the funds, we have no account. The governors appear to control the conduct of the keepers with much strictness, and the moral treatment of the patients is pursued with great propriety and attention. We trust we shall not be supposed to advocate the system of severity. Unnecessary severity we deprecate; and all curtailment of the rational comforts of the patients we are decidedly averse from; but we must say, that there is a certain whining cant of humanity in which we hear many persons indulge, a compliance with the suggestions of which, seems much more calculated for the gratification of the visitors than the benefit of the patients. * A constant inspection by the proper authorities will go far to correct abuses, but these inspectorial visits are not of such modern date, or of such exclusively British origin, as we are in the habit of supposing. In the twelfth century, Benjamin, the Jew of Tudela, found a large building at Bagdad, called "the House of Mercy," destined for the reception of lunatics. They were in chains, it is true, but the magistrates made a monthly visitation of them, and suffered those who had recovered their reason to return to their friends. †

The due occupation of their time is a point of essential utility to lunatics. At the hospital appropriated for their reception at Berlin, the employment of every hour is fixed, and is announced to the patients by signal; each individual is fully occupied, and the strictest discipline is maintained. Perhaps, as has been observed to us by an enlightened friend, this military appropriation of time is not consistent with our English manners and ideas of liberty. This may be the case; but, in some shape or other, we are advocates for the regular employment of lunatics. It has often struck us, that what is true of other hospitals may be said of

* A patient who is quiet the moment a strong iron handcuff is applied, will seriously injure himself or his keepers in a manacle of leather; he knows the inutility of struggling in the first, and he rarely loses hope of escaping from the latter.

† Benjaminis Itinerarium. 8vo. Lugd. Bat. 1633. P. 69.

those for lunatics;—to make them places of recreation and indulgence, which the unfortunate inmates never experienced in their healthy state, is a very likely mode of insuring their return, after a temporary absence at their own homes and ordinary occupations. There is an ingenious plan adopted at Sonnenstein Lunatic Asylum, near Dresden, an establishment where bodily exercise is looked upon as of great importance in the treatment. By this plan, sluggish patients, who often lounge about the fire all day, and sleep very little at night, are obliged to exert themselves; they are placed in a machine somewhat on the principle of the wheel formerly employed for the reception of turn-spit dogs; they are properly secured, to prevent all injury; after the first step made in this machine, the person within must necessarily continue to move his limbs as in walking. By these means, after some time, fatigue to any extent may be produced, and the patient often falls into a sound and refreshing sleep. Another very useful contrivance, and of great simplicity, is employed at Berlin to restrain furious patients. They are seated in a chair; the hands secured in proper gloves, but their feet not allowed to touch the floor. This prevents all violent motion as effectually as possible. The inventor we know not; the machine, stated to be used near Dresden, is employed by Dr Piegnitz. But all this time we have forgot Dr Carter.

Our opinion of his work scarcely requires summing up:—Had it been entitled Memoranda, or Sketches, or any thing that did not imply a description of hospitals, climates, and diseases, we should have risen from the perusal with diminished disappointment. We lament this, because Dr Carter is, if we are not mistaken, the first travelling Fellow of Oxford, who has given any account of his medical labours; and, on the allowance of L. 300 per annum for ten years, half of which were to be spent in travelling for the improvement of physic, much might have been done to fulfil the intentions of Radcliffe, and many important facts might have been collected. Far be it from us to insinuate that Dr Carter has not improved himself; indeed, we believe that no man can have travelled so long without having acquired much useful knowledge; but we must say, that he has been singularly unfortunate in his attempt at communicating it to others.

II.

Pathological and Practical Remarks on Ulcerations of the Genital Organs; pointing out the Characters by which they may be discriminated; shewing the consecutive Diseases to which they give rise; and containing an Inquiry into the Use of Mercury in their Treatment. By JAMES EVANS, Surgeon of his Majesty's 57th Regiment. Part I. *On Ulcers which are not to be considered as the primary affection of Syphilis, and which do not require Mercury for their Cure.* pp. 127. 8vo. London, 1819.

THE subject of the work is one on which much has been written lately, but which we regard as by no means exhausted; and highly as the contents of this volume compel us to respect the talents of its author, we cannot flatter him so far as to say, we think he will not leave much,—very much indeed,—to future inquirers. The little attention that seems to have been bestowed by the medical world on the investigation which has recently been conducted by the surgeons of the army, and the results of which have been, from time to time, communicated to the public, in a form so unassuming, as to prove that the love of truth, not the vanity of authorship, prompted the writers, has excited our surprise not a little. The generality of medical men appear to have regarded writings, which served to overturn practical doctrines, considered hitherto as infallible and unassailable, respecting one of the most important diseases which came under their cognizance, with no greater degree of interest than might have been fairly bestowed on an insignificant addition to an over-swollen Materia Medica from the woods of New South Wales, or on a dispute about the form of the cancelli of the bones between two German anatomists; whilst here and there a sciolist has taken up his pen to prove, that no result had appeared which might not have been readily anticipated,—that the inquirers were ignorant of the works and doctrines of Mr John Hunter,—that the pseudo-syphilis of Mr Abernethy recovered under their hands, and they fancied they were curing the real disease;—as if a set of men, the learning and research of some of whom are proverbial, and of whom others rank in the very first class of well informed practitioners, could be ignorant of books and doctrines familiar to the merest Tyro in physic! Not only is it impossible that this should be

the case with Drs Thomson and Hennen, Messrs Guthrie and Rose, but we would assert, with equal confidence, of those medical officers of the army, who have taken a less conspicuous, but not a less useful, share in the investigation,—who have written on the subject, not *directly* to the public, but to it through the medium of the Medical Board,—that they possess a degree of knowledge respecting the disease very superior to that implied in the writings of their assailants; whilst the very familiar sources of information, which these have chosen to suppose them ignorant or neglectful of, have not been unresorted to.

But superficial information and flippancy are venial errors. There is still another class of persons (fortunately not numerous) upon whom we might feel disposed to bestow a few words of castigation, did severity at all accord with the habitual spirit of our journal; for when men, who, by the humble way in which they have communicated their ideas to others, have evinced contempt of fame, and solicitude only for the benefit of medical science, are assailed with oblique hints, about sporting with the "health of our brave defenders," it is difficult not to conceive some degree of disgust, as well of the weak sentimentality of the language, as of the feeling which prompts it. Happily we have it in our power to give a very satisfactory refutation of accusations of this kind in the following words of a circular letter from the Army Medical Board Office. "It appears that the 1940 cases treated as here described" (without mercury) "are now recovered of their venereal complaints, and either doing duty as soldiers, or have been discharged the service for military reasons, altogether unconnected with the venereal disease." This is sufficiently conclusive as to any permanent constitutional injury inflicted on the soldiers by the manner in which their complaints are treated in the military hospitals; and this statement, too, stands advantageously contrasted with another, in the same document, respecting men who had undergone mercurial courses on account of their venereal diseases. In other respects, as the period of confinement, &c. the non-mercurial treatment might be shewn, from the same paper, to be by no means comparatively disadvantageous to our soldiers, did we conceive it correct to be very liberal in quotations from a record which cannot be considered as fairly before the public.

We trust that Sir James M'Grigor and Dr Franklyn will excuse the liberty we have taken in making one extract from their valuable circular;—to make many might be an unfair anticipation of a regular publication, which we sincerely hope will proceed from the same highly respectable quarter. As an additional argument, we may observe, that we have been told by persons of

undoubted veracity, that officers almost uniformly choose to have their venereal complaints treated without mercury, which would not be the case did the soldiers suffer from the same plan. But is it at all credible, that a line of conduct, the mere abstaining from which it would be an abuse of language to term humanity, should be pursued by the members of a profession which has been said to be "more favourable than any other to the formation of a mental constitution, that unites in it very high degrees of intellectual and moral vigour; because it calls forth the steady and unremitting exertions of benevolence, under the direction of cultivated reason, and, by opening a wider and wider sphere of duty, progressively augments their reciprocal energies?"*

We must now interrupt our general remarks, to give some account of the work before us. This first part, professing to treat of "ulcers, which are not to be considered as the primary affection of *syphilis*, and *which do not require mercury for their cure*," is divided into two books; in the first of which, diseases generally or entirely independent of sexual intercourse are examined, whilst the second comprises such as generally or entirely arise from this intercourse.

To the first class are referred Phlegmon, Anthrax, Tubercula, Herpes Præputialis, Psoriasis Præputialis, and Ulcus Erraticum; and to the second, Excoriatio, Erysipelas, and what the author is pleased to term Venerola Vulgaris, V. Superficialis, and V. Indurata.

The diseases in the first book are described with considerable, but varying minuteness; for whilst Anthrax usurps ten, and Ulcus erraticum fourteen pages, what we consider as the most important disease of his first class, Herpes præputialis, is discussed in four. The very first page, indeed, of his first chapter appears to us to shew a little want of judgment in the appreciation of the relative importance of objects; it displays, too, a disposition, not in unison with the general character of our author, so far as we are able to estimate it from his work, to attribute to medical men a degree of ignorance or inattention they are not justly chargeable with.

"It is somewhat curious," says he, "that so much should have been written on ulcers of the genitals, and so little have been said of a disease at times so frequent, and often so formidable in its appearance, as phlegmon of the prepuce, or body of the penis; the fact I believe to be, that in almost every instance (in its ulcerative stage at

* Percival's Medical Ethics.

least) it has been looked upon as chancre; and if, when opened, the tediousness in healing, the slow and long continued ulceration which usually takes place, with the unhealthiness of its surface, and the production of bubo, be excused, all these may occasionally be pleaded in extenuation of error." Then he subjoins in a note, "The only modern author I have met with, who speaks of this disease, is Mr Wadd, who gives a plate representing it in the suppurative stage. The learned and ingenious author of the work "Sur la Non-existence de la Maladie Venèrienne," (page 46,) tells us, that Gordonius, who wrote in 1303, speaks of abscesses of the penis."

Now, we candidly think that the writer himself gives, in the following page, a tolerably correct explanation of the silence which to him seems so embarrassing: "The appearance and progress of phlegmon in these parts being *exactly similar* to what they are when it occurs elsewhere, it will be superfluous to attempt any description." Phlegmon being the same affection wherever it is seated, modern surgeons seem to have acted judiciously in discarding it from the list of diseases of the penis, nor do we feel at all disposed to attribute their silence to its having "been looked upon as chancre." It is mentioned by many of the older writers besides Gordonius; amongst others we may cite Mesue, Haly Abbas, and Alsahazarius, as having named it, and that they did not confound it with an ulcer of these parts may serve to prove, that its diagnosis cannot be beyond the reach of medical men of the present day.

There is an able account of anthrax of the penis, and a well drawn up case, illustrative of the practice to be adopted when the sloughing action threatens to be excessive, or, to use the author's expression, "beyond what is necessary for the separation of the contents of the tumour, and the removal of some portions of diseased integument." His Tubercula are insignificant diseases, and do not seem to merit any other commentary; but the account of Herpes præputialis cannot be allowed to pass without the omission of the most important cause of this affection undergoing some observation. The meagreness of his description of the disease the author endeavours to repair by a reference to Dr Bateman, and, in so doing, he has chosen well; for, highly as we respect Mr E.'s talent for describing, and this work proves it to be of the very first order, yet we conceive that it is no reproach to any one to say, that he cannot surpass the graphic sketches of the writer of the Synopsis of Cutaneous Diseases. But why is not stricture noticed among the causes of this affection? The author tells us, that the cause will be most frequently found in derangement of the primæ viæ; but is it not quite as likely to be found in continuous as in remote

sympathy? We think it is; and experience has shewn us, that here, at least, "le vraisemblable est le vrai;" for not only do the two affections frequently co-exist, but the evident existence of the one may induce the practitioner to suspect, and often lead him to discover, the other. We consider the case related by the author at page 77, as an example of this affection arising from urethral disease. Nowhere in this work are diseases of the urethra alluded to as causes of ulceration or any affection of the prepuce, though, in the enumeration of such causes, either by the author to whom Mr E. here refers, or by the exalted individual (Mr Abernethy) to whom his book is dedicated, they have not been omitted. For Psoriasis præputialis and Ulcus erraticum we must beg leave to refer our readers to the work itself.

Of the diseases of the second book, Excoriatio and Erysipelas present little worthy of remark; but we are not without apprehension that the following grave claim to discovery with respect to the former may excite a smile on the cheek of some waggish reader. "It may be asked, when there exist such almost unsurmountable difficulties in ascertaining the exciting cause of this affection, how it happens, that a cause has been discovered which no former writer appears to have considered as such? namely, that of repeated and long-continued friction." Now, we must say, that we think this solemn trifling beneath an author, who, as we shall immediately endeavour to shew, has established a title to a very high rank indeed amongst minute observers and accurate delineators. This is exalted praise, but the following quotation will, we think, warrant our bestowing it.

"This disease," (Venerola vulgaris and Ulcus elevatum,) "which is more frequently met with than all other ulcerations of the parts of generation put together, may be seated on any part of the body to which its cause may be applied. Accordingly, though it is most frequently found on the body of the penis, the inner or outer surface of the prepuce, and on the scrotum, I have met with instances of it on various parts of the thighs.

"Its progress may be divided into four stages—1st, The pustular; 2d, The ulcerative; 3d, The elevated, or granulating; and, 4th, That of depression and cicatrization.

"The first stage comprises the first four or six days of the disease, and usually commences from three to seven days after connexion;—it begins with itching and redness, followed by the formation of a spherical pustule, surrounded with an areola.

"The second stage is ushered in by the formation of a scab, which supplies the place of the pustule. Under this, (the ulcerative process continuing to go on,) the accumulation of matter sometimes occasions considerable pain, until it forces its way out, by bursting the

cuticle, or by a portion of the scab being otherwise detached. The scab acquires, at each time that this oozing takes place, some degree of enlargement by an additional concretion of matter. Its form is oftentimes irregular, though generally it inclines to the circular. When first formed, it is rather sunk in the centre, until, by repeated accumulation, its thickness becomes sufficient to counteract this appearance. It varies in colour according to its age, being, when newly formed, yellow, but afterwards becoming darker and darker, until nearly black, the shade deepening towards the centre.

"It is in this stage of the disease, that these cases are most frequently admitted into hospital, when, if the scab be removed, a concave ulcer, of the oval or circular figure, with its surface of a glossy brown, an unhealthy red, or, what is more frequent, of a dirty yellow colour, is exposed.

"The termination of this and the commencement of the third stage, which usually takes place about the eighth or tenth day, is marked by an elevation of the edge, and a filling or rising up of the surface of the sore, which eventually becomes seated upon a fungus raised above the level of the surrounding parts. It is in this stage, and by these marks, that this ulcer may be distinguished from every other sore affecting these parts."

Then follows a more minute description of the state and appearance of the edge, surface, and base, in this stage of the ulcer, for which we must refer the reader to the work itself. The author informs us, that it is from the fourteenth to the eighteenth day that "the sore has usually risen to its greatest height." When it has attained this, "it remains stationary for an uncertain time, after which it gradually, though perhaps very slowly, declines and heals, which process forms the fourth stage."

We think all this original, and highly creditable to the writer's talent; nor do we conceive its claim to the former epithet to be at all impeached by what is subsequently, and we believe correctly, intimated by Mr Evans himself;—that the superficial sore without induration, but with elevated edges, as well as the sore without induration or elevated edges of Mr Carmichael, and venerola vulgaris, are "one and the same disease." Every surgeon must have seen the sore in question, but Mr E. alone has described it correctly. That he has done so we are warranted by our own observation to assert; and, in descriptive works, he who first depicts phenomena with accuracy has the same claim to originality as he who, in a work of a different character, is the first to give their real explanation.

With respect to the causes of this disease, the author supports the following theories. 1st, That it may arise from the application of matter from a sore of the same description. 2d, That

the matter generated will produce the same disease in the person generating it. 3d, That it may arise from an altered secretion without breach of surface. 4th, That gonorrhœal matter will produce it. The first is proved, beyond all question, by direct experiments; and the second seems to be a very fair induction from facts. The observations, upon which the third and fourth are founded, are liable to a source of ambiguity which seems unavoidable, and which the author himself has adverted to,—that ulceration of the female parts may exist beyond the reach of the eye. But though we think these propositions hypothetical in the present state of our knowledge, we nevertheless conceive them worthy of attention and investigation. We have now before us a manuscript copy, in English, of M. Cullerier's lectures, delivered at the Venereal Hospital in Paris, from which we extract the following words: "It," (the venereal disease,) "has been supposed by some to originate from whites in women; these produce gonorrhœa in the male; this chancres," &c.

Two cases are quoted, which the author considers as "well calculated to excite a suspicion, that this disease may arise spontaneously." It appears, that, of two soldiers labouring under the disease, the one asserted that he had had no sexual intercourse for six, and the other for five months. All men, who have examined into the history of the venereal disease, know that there exists nearly the same quantum of *written* evidence of the occasional spontaneous origin of the malady which committed fearful ravages in Europe at the close of the 15th century, as of any characteristic it possessed. Questions, connected with the source and communication of diseases, are amongst the most difficult that are proposed for the solution of the pathologist; but as here we can rarely have any *direct* evidence, but the testimony of the individuals concerned, in a case in which there is, generally, an obvious temptation to falsehood, we feel disposed to decide in the negative, or, at least, to agree with Mr E. "that we should not hastily admit the spontaneous origin as a fact."

Concise rules for the treatment of all these disorders are given at the conclusion of each chapter. They seem in general very judicious,—the sore is to be treated on rational surgical principles, whilst the constitution is to be attended to when it sympathizes, or is likely to do so, with the local affection. In this disease, for instance, we are told, that "when the symptomatic fever runs high, we must put the antiphlogistic plan in its fullest extent into practice; for, as has already been said, independent of the effect that constitutional affection has in impeding the

regular progress of the local disease, *it is generally the forerunner of consecutive symptoms.*"

The next disease in order, or what the author terms Venerola superficialis, he considers as only a variety of the preceding, and says, " that the difference between the two affections depends entirely upon the presence of constitutional irritation in that variety of which I am now speaking." We are informed too, which is strongly in confirmation of the connexion pointed out by the author between constitutional derangement attending the primary disease and consecutive affections, that he has never yet met with an instance of the present variety, that was not followed by such affections.

The remedies found most useful in the treatment of the constitutional symptoms of this disorder have been the lancet, purgatives, and diaphoretics. The applications to the sore have been sedative, or stimulant, according to the action in the part.

Of the succeeding disorder, Venerola indurata, or Ulcus induratum, the characteristic mark is " the base becoming of a cartilaginous hardness, unless the sore should be seated on the glans."

With respect to the cause of this disease, we are told, that although " in almost every instance it appears to be the immediate consequence of impure intercourse, yet the following cases shew that it is not always so, and that the application of gonorrhœa, or other morbid matter, generated by the person affected, may produce it." On examining these cases, we find them not entirely exempt from sources of ambiguity; but we do not mean to enter further, than we have already done, into this kind of discussion. The treatment may be inferred from what has been already said.

In an appendix on phagedæna and sloughing, we find little to praise, and nothing to censure, excepting the meaning which it has pleased the author to annex to the former term, which he chooses to regard as synonymous with ulceration in general. Now, we have hitherto (in common, we believe, with others) conceived it to mean a peculiar form of ulceration, " which spreads, and, as it were, eats away the flesh." But to correct our error, the author refers us to the etymology of the word, and the definition he has himself given of it. The latter favour is but giving us the choice of an appeal from the decision of Mr Evans to the decision of Mr Evans, by which, we take it, we shall not gain much. By the former, we learn that this word is derived from one which signifies to eat, which makes pretty clearly for our side of the question; and even had the etymology been against us, we should not have felt much in-

clined to surrender our opinion, having been taught, some time ago, by a very great master, "that the instances are very few indeed, (if there are, in truth, any instances,) in which etymology furnishes effectual aids to guide us, either in writing with propriety the dialect of our own times, or in fixing the exact signification of ambiguous terms, or in drawing the line between expressions which seem to be nearly equivalent." * When Celsus said, that in "φαγέδαινα" "minimé differendum, sed protinus iisdem medicamentis occurrendum est, et si parum valent, ferro adurendum," he certainly had not a common sore in view. But there has been enough of this; and we assure our readers that we should not have said so much about a trifling error in an author of considerable talent, whose book we think well worthy of being read and remembered, had we not noticed that he is singularly inclined to innovations with respect to language. Excoriatio is not Latin, but it is employed by Sauvages, and to his authority we willingly bow; but what shall we say of *venerola* and *venerolic?* Variola and rubeola are originally barbarisms, but time and authority have civilized them, and they are now universally admitted into the very best company; but we can discover no good reason, why we should be equally tolerant of these their still ruder progeny. Analogy would have made the adjective venerolous, but every thing like custom in language must be deviated from. Then we have repeatedly such phrases as "the *mean* nature employs," "every *mean* to be tried," (for *means,*) forms of expression now obsolete, if ever they have existed, among good writers; with whom, we are convinced, he is well acquainted. Indeed, it is evident that Mr E.'s faults of this kind are all intentional, for we have not lately met with any writer who excels him in *general* conciseness, simplicity, and perspicuity of language,—the only qualities worth regarding in the style of medical works.

It has not been with unmixed feelings that we have found ourselves called upon to censure so feeely many passages of a work, the merits of which we think very considerable; and it is truly painful to us to be obliged, on still another point, to bestow on Mr E. language very foreign to our general feeling towards him. Is it from ignorance of the real state of the fact, or from a weak compliance with opinions, which never could be well founded, that we meet with such passages as the following? "Ulcers, which are not to be considered as the primary affection of syphilis, and which do not require mercury for their

* Stewart's Philosophical Essays.

cure;" "it differs from that ulcer (chancre) in some very material points—mercury, so far from being necessary to the cure, is in general hurtful." We shall not go on accumulating quotations. Every one that has bestowed the least pains on the investigation of venereal diseases in general, must know very well, that those which pre-existed to the voyage of Columbus, were treated, and successfully so, without the mineral, and there is no point connected with the history of the disease which appeared in Europe at the epoch of that voyage, more unequivocally expressed, than that it was remediable by medicines and means, of which neither mercury, nor any of the reputed specifics of syphilis, as guaiacum, or sarsaparilla, formed a part.

That a disease committed considerable ravages in Europe towards the close of the 15th, and at the beginning of the 16th century, is a fact for which we have undoubted historical testimony, and that it was to this, that the name of syphilis was given by Fracastorius, is equally unquestionable. Now, it is of this disease, syphilis, which is supposed still to exist, and of which we have been told by authors, certainly highly respectable, that it is to be carefully distinguished from others, because it requires mercury for its cure, that we assert, from the testimony of writers of note, contemporary, some with its appearance, all with its ravages, that it was remediable without a grain of that mineral. That the authors in question may have been deceived with respect to some obscure points, one of which we have already adverted to, connected with the disease, cannot serve in any way to invalidate their testimony, in a matter cognizable by their senses. The symptoms are detailed, cases are given, and the cure of the disease is proved upon evidence, as much to be depended upon as human testimony to any fact whatsoever can be. Yet, with the works of Vigo, Aquilanus, Grundbeckius, Gaspar Torella, Leonicenus, Massa, Fracastorius himself, and a host of others, contemporaries of the disease, when it existed in a most violent form, to prove, that whosoever should try, would find it yield without the mineral, have the medical men who engaged in this investigation been accused, because facts led *them* to the same conclusion, of confounding syphilis with its resembling diseases, and of ignorance or neglect of works familiar to every tyro in the art. That practitioners, in general, should have leisure to bestow on researches into the early history of a disease, is not to be expected; but when men who write on a subject oppose *opinions* to facts, we have a right to exact from *them*, that no pains be spared to ascertain their validity. How those now examined became prevalent in this country,—how it has happened, that, because a

remedy was found useful in a disease it was supposed indispensably necessary, we leave to the curious in such matters to investigate.

We now take leave of our author, and of the subject. If, in any of our remarks regarding him, we have displayed a little asperity, we can assure him, that it has not been prompted by disrespect for his character as a writer. Where we have differed from him, we have, from a sense of duty, expressed that difference; but we declare to him, and to our readers in general, that it has rarely been our lot to meet with more of valuable information in a small compass, than in his little volume, and we sincerely hope and believe, that the second part of his work will realize the promise of the first.

III.

Report from the Select Committee, on the Doctrine of Contagion in the Plague, pp. 102. Ordered by the House of Commons to be printed, June 14, 1819.

Our readers will probably recollect, that, in the course of the last session of Parliament, Sir John Jackson moved for a committee to inquire into the expediency of abrogating or modifying the restrictions imposed by the quarantine laws; in which motion he was supported by the Right Honourable F. Robinson, President of the Board of Trade; and the reason assigned for this measure by Sir John Jackson was, that the doctrine of contagion had been shaken by evidence which came before a committee during the preceding Parliament, to inquire into the epidemic fever then prevailing in the metropolis. The principal objects of inquiry on the subjects in question were, *first*, Is the plague capable of being communicated from person to person, either by immediate contact with those diseased, or, intermediately, by contact with infected goods? Or, *secondly*, Is it an epidemic depending only on a peculiar state of atmosphere? We shall now give the Report in full, which is the result of their labours.

"Your committee being appointed to consider the validity of the received doctrines, concerning the nature of contagious and infectious diseases, as distinguished from other epidemics, have proceeded to examine a number of medical gentlemen, whose practical experience, or general knowledge of the subject, appeared to your commit-

tee most likely to furnish the means of acquiring the most satisfactory information. They have also had the evidence of a number of persons, whose residence in infected countries, or whose commercial or official employments, enabled them to communicate information as to facts, and on the principle and efficacy of the laws of quarantine. All the opinions of the medical men whom your committee have examined, with the exception of two, are in favour of the received doctrine, that the plague is a disease communicable by contact only, and different in that respect from epidemic fever; nor do your committee see any thing in the rest of the evidence they have collected, which would induce them to dissent from that opinion. It appears from some of the evidence, that the extension and virulence of the disorder is considerably modified by atmospheric influence; and a doubt has prevailed, whether, under any circumstances, the disease could be received and propagated in the climate of Britain. No fact whatever has been stated, to shew, that any instance of the disorder has occurred, or that it has ever been known to have been brought into the Lazarettos for many years: but your committee do not think themselves warranted to infer from thence, that the disease cannot exist in England; because, in the first place, a disease resembling, in most respects, the plague, is well known to have prevailed here, in many periods of our history, particularly in 1665, 1666. And further, it appears, that in many places, and in climates of various nature, the plague has prevailed after intervals of very considerable duration. Your committee would also observe, down to the year 1800, regulations were adopted, which must have had the effect of preventing goods, infected with the plague, from being shipped directly for Britain; and they abstain from giving any opinion on the nature and application of the quarantine regulations, as not falling within the scope of inquiry to which they have been directed, but they see no reason to question the validity of the principles on which such regulations appear to have been adopted."

We shall defer our remarks on this report until we have laid before our readers, as clear an abstract of the evidence before the committee as our limits will allow.

Dr Charles Maclean, who was first examined, states, that he has studied the plague in the Greek Pest-Hospital at Constantinople, in which he resided 17 days, and that, during his stay there, he himself caught the disease. The inferences supplied by his experiments on plague were sufficient to confirm him in those conclusions against the existence of contagion, which he had previously deduced in respect to yellow fever, typhus, and epidemic diseases generally.

After this sweeping conclusion, he thus modestly speaks of himself, and of his search after truth:

"If it should be thought that this is but an inadequate experience, I would entreat of the committee to recollect how little the value of

experience may be commensurate with its duration; and that the result of experience in the application of false knowledge, is but dexterity in the practice of error, which is as much worse than mere inexperience, as false knowledge is worse than absolute ignorance. Since the establishment of the doctrine of contagion, I am not aware that any other physician, now living, has been experimentally in such intimate collision as myself with what is called The Plague of the Levant; * and if the result of my researches should ultimately prove adequate to dispel, in respect to the cause of that malady, the darkness of centuries, they will not be denied to be of unprecedented efficiency."

He then goes on to assert, that the plague is not contagious, and being asked to explain how he caught the fever when in the Pest-Hospital, he replied, "by the air."

"It was in August, a month in which plague generally prevails most at Constantinople; I was a stranger to the climate and otherwise under particular circumstances; the deprivation of food, insufficiency of nourishment, and also some degree of irritation of mind, under the idea, that the people around me were endeavouring to frustrate my object; and all these might surely be sufficient to account for the occurrence of disease during the pestilential season, without supposing contagion."

Dr Maclean, in short, considers, that his having been affected with plague, must be attributed to the climate, short commons, and his being put out of humour; and that his having daily and hourly contact with patients labouring under an aggravated form of that disease, and living in the contaminated air of the hospital, had no share in its production.

Dr Maclean distinguishes contagious from epidemic diseases, by supposing that the former are capable of being communicated by contact, or contiguity, whereas epidemics are produced by such causes as are capable of operating simultaneously upon any portion, or the whole of a community, and that they cannot become contagious. He adds, that contagious dis-

* We do not exactly understand the force of this assertion. How many physicians may be now living, who have been in as intimate collision with what is called The Plague of the Levant as Dr Maclean, we do not know; and if none of them placed themselves in such a situation *experimentally*, we know that some did it *voluntarily*, and from the noblest motives that can influence human conduct. During our expedition to Egypt, the present President of the College of Physicians of Edinburgh, three several times, shut himself up in the lazarettos for months together, when the inferior officers to whom the duty was allotted were themselves infected, and rendered incapable of attending the sick. Nor did he escape with impunity, for he was twice affected with the disease, and certainly not from the causes to which Dr Maclean has ascribed his own illness.

eases occur only once during life; but on being asked if the small-pox be not a contagious disease, and whether it has not occurred more than once in the same person, he admits that it is contagious, but does not believe it ever has twice affected the same person, and, were he to see a case of second small-pox, he would distrust even the evidence of his own eyes, p. 13.* In defining the plague, he says, its phenomena embrace almost all the symptoms which the living body is capable of exhibiting, few of these, however, occurring at the same time, in the same person. He quotes Fra Louigi di Pavia, who attended a plague hospital for 30 years, and who says, the surest symptoms of plague are the eyes dusky and turbid, fixed and sparkling; the tongue forked, of a whitish colour, inclining to yellow, with the extremity red, which branches out in a number of small ramifications, exceedingly inflamed. He proceeds to describe, from his own experience, the appearance of the countenance:

"The skin and muscles of the face exhibit a tremulous appearance, and with a certain fierceness of the eyes, and sometimes an involuntary motion of one of the eye-lids, as in winking, gives an expression of rather a ludicrous wildness of aspect, increased by the efforts of the patient to preserve the composure of his features, as if conscious of the insubordination of his features to preserve their composure."

The appearance of the tongue varies from blackish to brown, white, and now and then flesh-red colour; he has also seen it of a glossy grey, *resembling the first formation of icicles upon water.* And this last state he considers as promising the most favourable termination. The brain and circulating system are variously affected in the earlier and milder stages of the plague. There is a rapid succession of ideas, hurried speech, a tremulous and unsteady walk, and a distracted look. The higher degrees are accompanied by delirium, anxiety, languor, and melancholy, as well as great muscular debility, throughout the disease. At the commencement, the bowels are usually constipated; but, in the progress of the disease, diarrhœa and hæmorrhage are not unfrequent symptoms, and, when severe, denote much danger. Dr M. adds, however, thatn one of those symptoms are pathognomic, nor does he consider them as very distinct from those of the severe form of typhus and yellow fever in other countries. He does not put much dependence on the glandular affections as diagnostic of plague, but thinks

* Syphilis also is a contagious disease, and nobody doubts that it can occur *frequently* during life.

the carbuncles are more decided marks of the disease, for buboes, he asserts, occur in typhus.* If these observations are correct, the inference, we think, must be, either that every fever is plague, or that nothing is plague.

During the prevalence of the plague at Constantinople, the Frank merchants shut themselves up in their houses, and, by so doing, they generally avoid the disease. But Dr Maclean attributes the success of this measure to their avoiding vicissitudes of atmosphere, by keeping their windows shut during the pestilential season. Speaking of the experiments of Dr White, he says, that gentleman first rubbed on his arm matter which was taken from a bubo of a person supposed to have the plague, by which he was not affected; he afterwards inoculated himself thrice in the arm with similar matter: that he was not affected by the two first inoculations, but, after the third, he sickened of the plague, and died: which circumstance, nevertheless, Dr Maclean does not attribute to the experiments previously made by Dr White, but considers as an accidental coincidence his being seized with the disease at that time.

On being asked his opinion on the utility of the Quarantine regulations, he replies, that he does not consider the establishment of Lazarettos of the smallest use, and he goes on to say,

"If it be true that there never has arrived at any one period of time any one person from the Levant, or any other place, actually labouring under the plague; and if it be true, according to the advocates for contagion, that goods, wares, and merchandise, can retain infection for seven, fourteen, or twenty years; it must be apparent, that, with respect to goods, as well as with respect to persons, a quarantine of forty days can be of no sort of use."

He states, on the authority of Dr Caruhanha, and of Dr Grieves, Superintendent of Quarantine at Malta, that no case of plague had occurred in the Lazaretto for fifteen years; nor, in the plague of 1813, was any officer of the Lazaretto affected by the disease. On being asked, if he was aware, that, in the towns of the East, the Turks suffer in a greater proportion than the Christian population? he answers, that he knows the fact to have been so represented by Christian travellers in the Levant; but that he considers this as a mere assumption; such travellers cannot possibly know any thing at all of the matter, except what is represented to them by Christians believing in in contagion, or by the superintendents of plague establish-

* Buboes occur *very rarely* in typhus, and only as sequelæ of the disease; they occur *very commonly* in plague, and always as a primary symptom.

ments; and that the want of bills of mortality amongst the Turks must render such inferences of no value. Yet, in his very next answer, he asserts, that the Turks, who have no belief in contagion, recover in much greater numbers from the plague than the Christians who entertain that belief; and this, he adds, is "confirmed by facts, and it is stated by various travellers."

From the above statement, it is sufficiently evident, that Dr Maclean asserts or denies, as he may find most convenient; for here he has first denied, and then believed, the statements of travellers; first stated the want of bills of mortality to be an obstacle in ascertaining the proportion of recoveries, and then has done it quite as well without them. The doctrine of contagion, according to Dr Maclean, originated in the Council of Trent: the Pope, desirous of removing the council to Bologna, having suborned Fracastorius and certain other physicians to circulate the report, that a malady had broken out, which spread itself rapidly from person to person by contact: and that the ancients had no idea of contagion. We have the following reasons given for believing that the plague is not contagious:

"1st, That this and all other epidemic diseases appear generally at certain seasons, and disappear at other certain periods, different in different countries. 2dly, They also cease generally at the time at which the greatest number of persons are affected, which seems wholly incompatible with the existence of contagion. And, 3d, Because they are capable of affecting the same person repeatedly, which there is no proof that contagious general diseases are capable of doing."

The epidemic season at Smyrna, as stated by Dr Maclean, is from March to June or July; at Constantinople, it begins in July or August, and ends in November or December;—and, if this be correct, we have thus two places, not far apart, the epidemic seasons of which, taken together, occupy ten months in the year. But it will be found, in the progress of this subject, that Constantinople is never totally free from plague.

This is the substance of Dr Maclean's evidence, which we have been tempted to give thus much at large, because he is the Goliah of the non-contagionists; but, to avoid going over the same ground again, we shall reserve our remarks until we have gone through the remainder of the evidence.

The next person examined was Dr Thomas Forster, whose answers were to the following effect:—That he has not any personal knowledge of the plague; but from such information as he has been able to collect, he considers it a contagious disease, rendered less so by ventilation; he believes Buboes and

carbuncles to be the best diagnostics of this malady; he thinks the difference of our climate the principal cause of our exemption from plague, but does not regard our long immunity from plague as sufficient security against its recurrence if imported, since there might exist a state of climate and other causes to favour its production; he conceives that epidemics depend much upon a peculiar electric state of atmosphere. With regard to the possibility of an epidemic attacking the same person more than once, he says, that he is acquainted with a person who has had small-pox three times; he thinks Lucretius's opinions of the contagious nature of certain diseases as deserving to be noticed on the minutes of committee; and these we shall give presently in some extracts from the sixth book of his poem De Rerum Natura.

Dr James Johnson had served four or five years in the Mediterranean, where, although, he had not an opportunity of seeing the plague, yet he acquired information respecting its nature. He is of opinion that it is contagious, and that its activity depends much on a particular state of the atmosphere; that infected goods or merchandise may communicate the disease, but more particularly the clothes of diseased persons. He entertains this opinion on the authority of Dr Russell, and other authors who have described the disease; and the circumstance of its being an eruptive disease, strengthens that belief, as other diseases of that character universally arise from specific contagions or poisons. The malignant fevers of Trincomalee, Batavia, and Diamond Harbour, are not analogous to plague. *Epidemic diseases* may at first be produced by atmospheric influence, and afterwards be propagated by contagion. He thinks the return of plague is a revival of infection that has been latent or dormant, until a particular state of atmosphere rouses it to action. Dr Johnson well remarks, that the non-occurrence of plague in a Lazaretto, for fifty or an hundred years, is not a sufficient reason for doing away the quarantine laws; for although the climate of this country may be unfavourable to the production of plague, yet we do not know what share quarantine regulations may have had in our exemption from that disease.

Dr William Gladstone, when at Constantinople in 1806-7, saw cases of the plague in the months of December, January, February, and March. The origin of the disease he takes to be a diseased constitution of atmosphere, and deficient ventilation of the houses; and he attributes the plague of London in 1665 to similar causes. The absence of plague in this country he thinks cannot be attributed to our quarantine regulations, as they are very imperfect; and he does not suppose the contagion of plague ever to have been imported into the Lazarettos,

as there is not any instance of the expurgators having been affected. He adds, that epidemics may certainly become contagious.

Dr A. B Granville, who had seen the plague in Turkey, Greece, Asia, Syria, Egypt, &c. and in Constantinople, where he resided two years, describes the symptoms to be pretty generally these: Dizziness, great pain in the head, great prostration of strength, the nervous system very particularly affected, occasionally sickness of the stomach, and, invariably, the appearance of glandular swellings, with carbuncles, and other local or cutaneous symptoms, particularly livid spots on the body, if the disease goes beyond sixty hours. There are no symptoms of inflammation whatever, none, at least, such as attend inflammatory diseases during their first attack. He is ignorant of the cause, and only knows that the disease exists, and is spread by contagion. In Constantinople, Smyrna, Egypt, and Syria, the Franks, who can afford it, shut themselves up during the plague, and he never heard an instance of such persons being infected where the seclusion was perfect. Of course, this separation could not avail, if the disease was communicated by the air. In Egypt, this separation is continued until St John's day, June 24th, when the dew falls. Dr G. considers that the state of the air has no effect in checking the disease, except, perhaps, that it lessens the liability of persons to be affected by it. He understands that the plague has been carried from Aleppo, by caravans, to Bagdat, and Damascus: to the latter place it was carried by the army of some Pashwa, who had been on the coast to assist in the reduction of Jean d'Acre; that it has likewise been carried over land westward from Constantinople to Adrianople.

Dr Granville distinguishes contagion from infection, confining the former term to the communication of disease, by mere contact with a diseased person, or with something that has been in contact with him, whilst he limits the latter to receiving the disease through a contaminated atmosphere in a sick chamber. In support of this distinction, he mentions the following occurrence, which we shall give in his own words, as it bears directly on the object of the committee, and is very remarkable. "There is one instance in point amongst the most recent, and it rests on the highest authority." During the plague at Corfu, in 1815,

"one of the villages, which had been infected several months, had for some time, I believe 48 days, exhibited no sign of the plague, owing to the measure of segregation adopted by Sir Thomas Maitland. The village was reported to be released, and fumigation preparatory to its

receiving pratique ordered. The officer who had the surveillance of the village during the three or four months, had resided in the church, from there being no house that was not thought to be infected, in which church the priest and the people had been crowded just before the laws of segregation were ordered by Sir Thomas Maitland. Some of these died subsequently, for the church was ordered to be shut the instant the plague began. It was therefore necessary to purify this edifice before the people could go in again, and leave being granted for this purpose, the priest went in, and having touched the cloth of the great altar, so as to purify it by shaking it, he was seized with the plague, beginning with the headache, of such violence, that he fell on the steps of the altar, almost immediately; and in three hours, before he could be carried to the Lazaretto, he expired, with buboes under the arm, and livid spots over the body."

Dr Granville expresses his belief, that the poison, in this instance, was conveyed by touch alone, since the officers who had resided two months in this church were not affected. Since 1814, he says cases have occurred in the Lazaretto at Leghorn, where persons touching the infected part of bales of merchandise have been seized with plague. At Marseilles, a similar circumstance has happened twice in fifteen years, and, recently, according to the dispatches of Mr Hopner, the British Consul at Venice, in October 1818. During the prevalence of plague in the Levant, goods in general are not allowed to be shipped for England, and many vessels perform quarantine at ports in the Mediterranean, which lessens the probability of the contagion of plague having ever been imported into our Lazarettos: But the fact of the plague never having taken place here, for 154 years, or if for six or seven centuries, would not give the hope that it *cannot* exist in a British atmosphere, since we know it existed here in 1665.

John Green, Esq. is treasurer to the Levant Company, and resided in Constantinople from 1774 to 1780. In the year 1778, he witnessed a violent plague during the months of May, June, and July, which destroyed 200,000 persons. The most important part of his testimony, is that which expresses his disbelief, that goods cannot convey the contagion of plague; in support of which opinion, he mentions, that the clothes and bedding of persons dying of plague are commonly sold, and used without fear.

He states, that the disease may attack the same person frequently; that he knew an Abbé, of the French hospital, who acknowledged he had had it ten or twelve times. He has heard, however, that there is a particular kind of bubo called "*the Blessed*," which, when it occurs, renders the person much less liable to have the plague again, or if he should be afterwards

infected, the disease is slight. Mr Green conceives, that the dew which attends the hottest seasons has a powerful influence in checking the plague; and five years ago, Mr Morier informed him, that the plague which had begun to be prevalent, we believe, at Alexandria, ceased suddenly on the coming on of dense fogs, which fogs prevailed also in this country at the same time. The inhabitants of Constantinople believe, that exposing infected clothes for one night to the dew, has more effect in purification, than a similar exposure for a whole week in the sun. This last part, however, shews that apprehension does exist as to danger from this source. He would not recommend the abolition of quarantine laws, as the state of health of crews ought to be inquired into; and if the quarantine establishments of this country were abolished, no matter why, it might occasion the exclusion of our vessels from other countries.

"The Lazarettos of England are old men of war, with houses built upon them like an ark. The sides of these houses are open like a brewhouse, with shutters, and the floors are all open gratings in fact, so that the ventilation is excessive on board these vessels in Standgate Creek, greater than it is possible to give on any building on shore. The ships also swing with the tide; that is, when the tide turns, they change their sides to windward every six hours."

The mode of ventilation is different for different kinds of goods. Some articles, as goat's wool, if brought in a ship with a foul bill of health, are ordered to be entirely turned out of the packages, and exposed to the air. Bale goods are slit open on one side, and exposed for some time, which is then sewed up, and the other side exposed. The expurgators are ordered to thrust their arms into the bales as far as possible.

In Dr M'Leod's evidence, nothing important is added to what we have already stated.

Sir A. B. Faulkner was Staff Physician to the forces at Malta, during the plague which occurred there in 1813. He considers that this disease is propagated by contact only, or close approximation to the person or thing infected. He gives numerous and decided proofs of the success which attends complete separation of the healthy from the diseased, and instances the public general hospital, public prison, one of the barracks, and all the convents, except one, and the introduction of the disease into this last could be accounted for. He did not perceive that changes of temperature had any effect upon the progress of the disease, but he observed, that a high wind, from whatever quarter it blew, was always accompanied with an increase of the numbers affected. The disease had certainly no connection with marsh miasmata, the part of the town the most subject to

marsh fevers, being less affected by plague than many others which were considered more healthy. In the treatment of the plague, camphor, calomel, and topical blood-letting by leeches, were tried, but the remedies found to be of the most service, were cold affusion and turpentine.

Dr Pym has no doubt that the plague is contagious, but not very actively so. He considers the fever which prevailed at Gibraltar in 1804, and which destroyed 6000 persons, out of a population of 20,000, to have been a more formidable disease than the plague. He thinks it probable, that the contagion of plague has never been brought into our Lazarettos, which he thinks may be accounted for, upon the supposition that the cargoes are packed by healthy persons, or at a time when plague does not prevail. Before 1813, however, the duties of the expurgators were negligently performed.

Sir James M'Grigor was at the head of the Medical Staff of the British Army which came from India up the Red Sea, and disembarked at Kossier in May 1801. This army was 7886 strong, of which 3759 were Europeans, and 4127 natives of India; there died of the plague 38 Europeans, and 127 natives of India, in all 165. The disease came on with fever, and buboes; the two first cases could not be closely traced, but the sufferers had been at Rosetta, where there were cases of plague; from these two, four more caught the disease, and all the six died. The disorder is contagious, but he has known instances of contact without any ill effect. There were many instances of its spreading by contagion, particularly one of a prisoner confined in the guard-house, who afterwards appeared to have the plague, which was thus communicated to the other prisoners, and the men on guard. The plague did not appear connected with miasmata, as it was met with in the progress of the army through Upper Egypt. And Sir James M'Grigor thinks it probable, that it always exists in some degree in Egypt.

Dr James Curry considers the contagious nature of plague to be clearly shewn by the order of its progress, and the protection afforded by segregation. He supposes it may be often generated anew; but that it requires for its existence a peculiar state of atmosphere, which he thinks greatly to depend upon electric influence. He believes it was first introduced into the Mediterranean by fomites brought from Jerusalem and Syria by the Crusades.

Dr Tainsh, Surgeon of the Theseus, was in the Mediterranean in 1798-9. He received on board his ship five cases of plague, some of them severe. One of them, that of a French-

man, had suppurating buboes, but recovered. These cases have been alluded to by Dr Pym. The disease appears to have been communicated by intercourse between two vessels at sea; but the circumstances were not inquired into by the committee, and the case is, therefore, rendered of no value.

Mr Edward Hayes, who is, we believe, a merchant, resided 44 years in Smyrna; during which time he frequently saw the plague. He speaks confidently of the security afforded by confinement within doors during its prevalence. At Smyrna, the disease generally begins in March or April, and ends in August at the latest; but great cold or heat commonly arrest it. He informs us, that goods are shipped at all times, whether the plague prevails or not; that the merchandise may, therefore, be infected; but that the time occupied by the voyage, and the state of the persons exposed to the contagion, are probably causes which prevent its taking effect in this country and many other places; that, abroad, the plague does at times affect the Lazarettos. The quarantine regulations in Holland do not permit any vessel from the Levant to enter, if the plague prevailed there at the time of her departure. He affirms, that plague is communicable by goods; all woollen and linen goods may infect; animal substances, particularly goat's wool, are more dangerous than vegetable. He has known the disease communicated by inoculation, but is not aware that vaccination has been tried as a security against plague. He adds, that the Turks have lately learnt the danger of preserving the clothes of persons dying of this disease.

The evidence of Sir Robert Wilson is only a repetition of what has been already stated by Sir James M'Grigor Dr Nevinson, Dr Powel, Dr Frampton, and Dr Ash, profess not to have seen any cases of the plague, but they all agree in believing that it is contagious, both as regards persons and merchandise. The evidence of Dr Latham is to the same effect; and, in the examination of this gentleman, a strong leaning of the examinants to one side of the question, which we think has been rather injurious to the whole of this investigation, is more than usually conspicuous.

Dr Frank saw frequent cases of plague, whilst with Sir Ralph Abercrombie, in the year 1800, at Aboukir. He could distinctly trace its progress, by contagion, from one person to the sick and hospital attendants, who afterwards became infected; whilst none of the wounded, who were in a separate hospital, about half a mile from the former, had the disease. He has seen several instances of contact with impunity, and has himself handled plague patients. His opinion is, that the plague of

London in 1665 was imported, and that circumstances might arise in this country favourable to its existing again.

Dr Harrison has not any doubt of the highly contagious nature of plague; he believes it to be typhus, with the ordinary symptoms more severe, and with the addition of broad purple spots, buboes, and carbuncles. He was at Naples whilst the plague raged, in 1816, at Noya, 150 miles from thence; and, in 1817, there was a contagious and very mortal fever at Naples, supposed to be the plague. Dr Harrison is of opinion that the quarantine laws are useful, but that they might be modified as to persons; and he mentions a fact, which is very important,—that while passengers, who have made a long voyage, are liable to perform quarantine, couriers, who come in the least possible time, are not under such restrictions. The next person examined was Mr John Jenkins, a pilot of the port of Liverpool, who says, that, in eleven years, he never knew any one ill on board of the Lazaretto, and that there is a surgeon who attends every day.

We come, lastly, to Dr John Mitchell, whose opinions respecting contagion are precisely those of Dr Maclean; for which reason, and because a large part of his evidence is founded more upon the opinions of others than his own observation, our abstract of his testimony will be short. He tells us, that Desgenettes and Larry, the chief physician and surgeon of the French army, exposed themselves to the plague, without taking the disease; and Desgenettes shewed Assalini two punctures which he had made on himself, without effect, with a lancet dipped in the pus of a plague buboe. M. Assalini was told by Citizen Martin, captain of the Lazaretto at Marseilles, who for thirty years held that post, that, during that time, he had seen emptied some millions of bales of cotton, silk, fur, feathers, and other goods, coming from several places where the plague raged, without having seen any accident therefrom to the persons employed. Dr Mitchell classes the plague with malignant fevers, and mentions that Assalini does the same. Dr Mitchell lays much stress upon his experience when resident clerk in the Infirmary of this place; from which he concluded that the fever he then saw was not contagious. His opinion, promulgated in his inaugural dissertation, was at that time almost universally considered as heterodox. At any rate, it is completely overthrown by the experience of the late epidemic, during which a succession of matrons, nurses, and resident clerks, in both hospitals, have been infected, with scarcely an exception.

Dr Maclean comes again before the committee, and this second testimony concludes their volume. He amends his defini-

tions of epidemics, contagion, and infection, and adds fourteen reasons more to those already given for his want of faith in the doctrine of contagion. But we have neither room nor inclination to go deeper into the discussion of his views.

We have now furnished our readers with the substance of the examinations before the Committee of the House of Commons; and that our abstract is not more clear, has arisen from the very desultory manner in which the inquiry was conducted. The number of medical men examined was nineteen; only two of whom, Dr Maclean and Dr Mitchell, deny the contagious nature of the plague. The non-contagionists are, consequently, to the contagionists as ten to one. But we feel confident that, in point of fact, the disproportion generally is much greater; and if the committee had extended their examination to the whole of the faculty of London, it is our conviction they could not have raised more than one recruit for Dr Maclean, perhaps not one; for we do not believe that Dr Robarts, who, it appears, first made infidels of the Right Honourable President of the Board of Trade, and the Honourable Chairman Sir John Jackson, is at all prepared to go the same length with Drs Maclean and Mitchell in this heresy.

That the plague is highly contagious is, perhaps, the only inference that can be much relied upon, which results from the labours of the committee. The conflicting assertions as to facts, and the various opinions deduced from similar facts, are, at first sight, not calculated to leave a favourable impression as to the value of medical science; but the numberless sources of error which perplex such investigations, are only known to those who have long applied to them. For our opinion on the general question, Whether typhus and other fevers are contagious? we shall refer to former numbers of our Journal.* That contagion was a lamentable feature in the epidemic fevers which have recently afflicted Britain and Ireland, is so evident, that we cannot comprehend the organization of that man's mind who doubts, and still less his who denies it.

With regard to the frequent allusions, in the evidence which we have just examined, to the opinions of the ancients on contagion, we do not think them of much value; for it is not sufficient to know that they believed in contagion, unless we are in possession of their reasons, which we cannot know while we are ignorant of the diseases they describe: For example, Whether the plague of Athens, described by Thucydides, was the

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* See our Reviews of *Dr Barker's Report*, &c. in our 58th Number, and of *Dr Stokes on Contagion*, in No. 59.

disease now called Plague, is very doubtful; we think it more probable the plague of the present day was then unknown, as Herodotus, who was the contemporary of Thucydides, makes no mention of the plague when describing Egypt, though he has said much of the climate, and mentions, that, at particular seasons, the Egyptians were habituated to taking emetics and cathartics for three successive days, in each of the months they considered the most unhealthy; and it is not to be supposed that so accurate an historian could omit so remarkable a feature as the plague has since formed in the natural history of that country. Lucretius, who wrote about 350 years later, and who was in those days what Armstrong the poet has been in ours, has powerfully and beautifully described a pestilence, from which we are tempted to give the following short extracts, to shew that, 1500 years before the Council of Trent, in addition to a knowledge of endemics and epidemics, contagion was allowed to have its share in the spreading of the disease.

"Nam quid Britannis cœlum differre putamus,
Et quod in Ægypto est, qua mundi clandicat axis?
Quidve quod in Ponto est, differre et Gadibus, atque
Usque ad nigra virum, percocto sæcla calore?"

LUCRET. *de Rerum Natura*, Lib. vi. l. 1104.

"Est Elephas morbus, qui propter flumina Nili
Gignitur Ægypto in media, neque præterea unquam."

l. 1112.

"Et, cum spiranteis mistas hinc ducimus auras
Illa quoque in corpus pariter sorbere necesse est."

l. 1127.

"Quippe et enim nullo cessabant tempore apisci
Ex aliis alios avidi contagia morbi."

l. 1234.

"Qui fuerant autem præsto, contagibus ibant
Atque labore."

l. 1241.

The belief that the plague is contagious, is not in the least invalidated by the fact that many persons have escaped after an exposure that might have been expected to produce infection, since the same may be urged against small-pox, which Dr Maclean admits to be a contagious disease; and he must also admit, that, whilst many who are exposed to that contagion contract the disease, there are likewise many who do not; a remark which applies also to inoculation in both. The question has been repeatedly asked, Whether our long immunity from plague were sufficient ground for abrogating the quarantine laws? But it will be seen, that, although the island of Malta is, from many causes, much more exposed to this infection than

Britain, yet it was 138 years free from plague, and we have exceeded that period only sixteen years. The danger of altogether abolishing quarantine regulations is great and obvious; but, at the same time, we have no doubt they might be amended, and rendered less inconvenient to commerce.

We shall conclude by giving a Table, which will place in a forcible light the contrariety of opinion amongst the persons examined by the Committee.

	If contagious.	If contagious by Goods.	If Quarantine is of use.	If an eruptive Disease.	If the Plague of 1665 were true Levant Plague.	If from personal Observation.
Sir J. M'Grigor	Yes	Yes	Yes	Yes	Yes	Yes
Sir B. Faulkner	Yes	Yes	Yes	Yes	Yes	Yes
Dr Pym	Yes	Yes	Yes	Yes	Yes	No
— Granville	Yes	Yes	Yes	Always	Yes	Yes
— Powell	Yes	Yes	Yes			No
— Ash	Yes	Yes	Yes			No
— Latham	Yes	Yes	Yes			No
— Frank	Yes	Yes	Yes			Yes
— Frampton	Yes		Yes	Yes		No
— Harrison	Yes	Yes			Yes	No
Mr Hayes	Yes	Yes				Yes
Dr Tainsh	Yes			Yes		Yes
Sir R. Wilson	Yes					Yes
Dr Johnson	Yes	Yes	Yes	Always	Doubtful	No
— Forster	Yes	Yes	Yes	Yes	No	No
— Gladstone	Yes	Yes	Yes	Generally	No	Yes
— Nevinson	Yes	Yes	Yes	No	Yes	No
— M'Leod	Yes	Yes	Doubtful	Yes	Yes	No
— Curry	Yes	Improbable	Yes		Yes	No
Mr Green	Yes	No	Yes	Yes	Yes	Yes
Dr Maclean	No	No	No		No	Yes
— Mitchell	No	No	No	No	No	No

IV.

On the Mimoses; or a Descriptive, Diagnostic, and Practical Essay on the Affections usually denominated Dyspeptic, Hypochondriac, Bilious, Nervous, Chlorotic, Hysteric, Spasmodic, &c. By MARSHALL HALL, M. D. F.R.S.E. Author of a Treatise on Diagnosis, &c. 8vo. pp. 176. London.

DR HAMILTON and Mr Abernethy have, of late years, called the attention of the profession, in a particular manner, to

those multitudinous affections of the system at large, and of different organs in particular, which result from a deranged condition of the contents of the intestinal canal, or of the functions of the chylopoetic viscera. Dr Wilson Philip, * and Dr Ayre, † have also contributed to extend our knowledge of this important subject.

Dr Hamilton shews the analogy and connection between a constipated and loaded condition of the intestinal canal and dyspepsia, the marasmus of children, chlorosis and hysteria, and traces to this source some affections of the head, palpitation of the heart, hæmatemesis, and discharges of blood by the anus. Mr Abernethy has clearly demonstrated the connection between disorders of the chylopoetic functions, and various affections of the head, chest, abdomen, skin, &c. Dr Philip and Dr Ayre have pursued similar paths of investigation, and the profession have long been promised a work on the same, or on a similar subject, from the pen of Dr Curry, the well-known lecturer at Guy's Hospital.

In the volume before us, Dr Hall intends to collect and embody, as it were, the system of facts belonging to this department of pathology.

Under the generic title *mimoses*, Dr Hall has grouped together several diseases, which he conceives to be of the same nature, to arise from the same causes, and to yield to the same remedies, although disjoined in our artificial systems of nosology, or altogether omitted. They are characterized by being "complex, multiform, and changeable, and by *imitating*, from the appearance and predominance of particular symptoms in particular instances, other diseases very different in their nature." In this definition, we wish that Dr Hall had employed the term *resembling* instead of imitating, which implies volition or agency. For the same reason, we think he has been unfortunate in the choice of his generic name, *Mimosis*, for this Protean class of diseases, because, by conveying a false idea, it has prevented his views from being so obvious or easily understood.

The volume is divided into five chapters, each of which is allotted to a very minute, but at the same time relatively concise description of the different species of this affection which he has recognized. The first is *Mimosis acuta*, or acute disorder of the digestive organs; the second *M. chronica*, is dyspepsia; the third, *M. discolor*, is chlorosis, which frequently origi-

* Medico-Chirurgical Transactions, Vol.
† Practical Observations on Marasmus.

nates in the first species; the fourth is *M. urgens*, or hysteria, the connection of which with derangement of the bowels is universally acknowledged; and the fifth, *M. inquieta*, which has no nosologic appellation, seems, in our author's opinion, to arise from disordered bowels, conjoined with exhaustion, or some great shock or irritation.

Each chapter, except the last, is divided into three sections. The first contains a *description* of the affection itself; the second traces its various *complications* and their *diagnostics*; and the last details the *treatment*. The numerous complications of these affections strike us as having been investigated with particular pains and industry, and discriminated with great care and attention.

The first chapter on the mimosis acuta occupies nearly half the volume, shewing the importance which the author ascribes to this particular species. He divides it into two varieties.

"7. In order to facilitate the description, the Mimosis Acuta will be considered under two forms, differing only in degree,—in the greater or less severity of its symptoms in general, and in the presence or absence of some of the severer symptoms. These two forms of course admit of all intermediate shades.

"8. The Mimosis Acuta, even in its severer forms, comes on insidiously, and the patient gradually becomes incapacitated for business or his usual exercise; the less severe form occurs more gradually and insidiously still.

"9. The severer form of the Mimosis Acuta is early and principally characterized and distinguished by the concurrence of the following symptoms; namely, *weakness, tremor, fluttering, faintishness, tendency to perspiration, susceptibility to hurry and agitation, and loss of flesh.*

"10. The countenance is rather pale and thin; the lips are pale, and, with the chin, frequently tremulous, especially on speaking; the surface of the face is generally affected with an appearance of oily, clammy, and swarthy perspiration, especially near the nose; there is a loss of colour, and usually a degree of sallowness and darkness of the complexion in general, but principally about the eyes.

"11. The tongue is almost invariably loaded:—sometimes only slightly, whilst its edges are clean and red;—at other times it is more loaded, swollen, and œdematous, formed into deep sulci or plaits, and marked by pressure against the contiguous teeth, the inside of the cheeks being also impressed in the same manner; the papillæ of the tongue are numerous and enlarged; the gums red and swollen; the teeth and the mouth in general foul, and the breath loaded and fetid;—in a third instance the tongue may, however, be clean, but lobulated, whilst the internal mouth and breath are little affected. The first state of the tongue is observed when the affec-

tion has not continued long; the second, when its accession has been particularly slow and gradual; and the third, when a similar, but chronic state of disorder has long subsisted, and has, at length, been succeeded by the Mimosis Acuta.

"12. There is a tendency to perspiration on slight exertion, or any surprise, and, sometimes, in the night, or early in the morning; the skin is in general cool, rather moist, and clammy. The hands are apt to be cold; and the nails occasionally assume a lilac hue.

"13. The patient is usually affected with great tremor, observed on holding out the hand, on carrying a cup of tea, for instance, to the mouth, on attempting to stand erect or walk, or on being fatigued or hurried. The patient is liable to experience faintishness in the upright position if sustained for a little time. And he feels unaccountably feeble and weary.

"14. There is an early and daily loss of flesh. This, as well as the restoration of flesh during recovery, may be ascertained by weighing, as exemplified in some of the cases of this affection to be given hereafter.

"15. The patient experiences headach and vertigo, and he is nervous, and easily hurried and agitated. There is sometimes heaviness for sleep; sometimes great wakefulness and restlessness. There is almost universally a peculiar sense of fluttering about the heart and pit of the stomach. And there is frequently an acute pain in some part of the course of the colon.

"16. The appetite is generally much impaired, and there is often loathing of food; but sometimes the appetite is even greater than natural, and there is almost constant craving. The digestion is various, being sometimes quick, and at other times attended with great sense of load, distention, flatus, eructation, hiccough, and even vomiting. The bowels are at first constipated; afterwards constipation and diarrhœa alternate, and sometimes the latter symptom becomes nearly permanent: the motions, during the constipation, are small, during the diarrhœa, scanty, extremely fetid, dark-coloured, often accompanied by blood, and frequently attended by tenesmus.

"17. The urine is extremely loaded in the commencement of the Mimosis Acuta, but may become perfectly transparent during its continuance; it is often high-coloured, and like the other symptoms the appearance of this secretion is very liable to change.

"18. Besides the symptoms just enumerated, there are others which prevail more or less in almost every case; but they are on the whole less constant and more diversified; and of these, one sometimes predominates so much over the rest, as to engross the attention of the patient and sometimes of the practitioner too exclusively. The secondary affection is then considered as idiopathic, and the symptom is apt to be treated as the disease. It is therefore of the utmost importance to present the reader with the following distinct enumeration of these symptoms:—

1. *Headach, Vertigo, Stupor, &c.*
2. *Cough, viscid expectoration.*
3. *Paroxysms of oppressive dyspnœa.*
4. *Palpitation of the heart; frequency and irregularity of the pulse.*
5. *Frequent and violent hiccough, vomiting of food.*
6. *Some convulsive and spasmodic affections.*
7. *Pain in the epigastric, or one or both of the hypochondriac or chondiliac regions.*
8. *Constipation, diarrhœa, tenesmus.*
9. *Melæna.*
10. *Icterus.*
11. *Severe pains of some of the limbs.*

"22. In the less severe form of the Mimosis Acuta, the debility, tremor, loss of flesh, and tendency to faintishness and perspiration, § 9, are less observed, although perhaps not altogether absent.

"23. In this form of the Mimosis Acuta the countenance is rather sallow, and its surface is more or less affected as in the severer form described above. The tongue and the internal mouth are often affected in the severe degree described, § 11. The patient is incapable of pursuing any laborious employment. He is prone to perspire from a slight exertion. He perhaps experiences some loss of flesh. He is low spirited and listless. The appetite is sometimes impaired, but sometimes craving. And he suffers from the symptoms described §§ 15, 16, 17, and from the complications enumerated § 18, only in a milder form than the subject of the severer case of Mimosis Acuta.

"24. Besides the symptoms enumerated § 18, the less severe and more continued form of the Mimosis Acuta, is sometimes attended with one of the following affections:—furunculi, paronychia, hordeola, purpura, erythema nodosum, ulcerations or pustules with inflammation of the conjunctiva, a general decay of the teeth."

"105. The most general cause of the Mimosis Acuta is *sedentariness.* This affection is therefore frequently observed in persons of studious habits, or of sedentary and inactive occupations; it has occurred particularly in literary persons, in persons engaged in the sedentary employments of the lace-frame, the stocking-frame, the tambour, &c. in tailors, and in women.

"106. *Watching, fatigue, anxiety, errors in diet, confined and impure air, and want of cleanliness,* are also accessory causes of the Mimosis Acuta. This affection has sometimes appeared to have been immediately induced as an effect of repeated *colds.* It has been particularly frequent during the present hot summer of 1818. And it has occurred from alarm, or accident."

This long quotation will give our readers an idea of the style and manner of the work; they will doubtless recognize in it the description of a form of disease they have themselves repeatedly seen.

We pass over, too, the second chapter, which presents a short description of the character, diagnosis, and treatment of dyspepsia.

After the first, the third chapter is the most original and important. Under the designation of Mimosis decolor is comprised the affection termed chlorosis, together with some other disorders accompanied and denoted by morbid appearances of the colour or complexion. We are informed that it was at one time the author's intention to publish "*Representations* of the complexion, tongue, tinge of surface, and of the hands." We cannot regret this intention, although we very much doubt that it could have been executed in a manner at all satisfactory, for to this cause we probably owe, in a great measure, the very minute and graphic *descriptions* on these points, which occur in the present volume.

We must pass over altogether the chapter on the Mimosis urgens, or hysteria; which contains a very complete account of this affection, in its multitudinous and Protean forms, although it scarcely fills a score of pages.

The fifth chapter, on the Mimosis inquieta, is worthy of being more developed; because this is an affection not sufficiently known in medical writings.

Dr Hall deals very little in speculation. The little theory contained in this volume occurs in the "concluding observations," which we quote.

"320. Too much praise cannot be conferred on those members of the profession, who have so well elucidated the nature and treatment of some of the subjects of the preceding pages. There is no doubt, indeed, that this investigation of the Mimosis was suggested to me by what I have learnt from the invaluable labours of Dr Hamilton, Mr Abernethy, and other respectable writers. My situation in Nottingham, however, has been a principal cause of fixing my attention on a Class of Disorders, of which the usual causes are sedentariness and confinement. This town, so celebrated for its manufactories of cotton stockings and lace, embraces a very extensive population, a great majority of which,—men, women, and children,—are engaged from morning till evening, in the numerous sedentary occupations which these manufactories imply,—deprived of the salutary influence of pure air and gentle exercise.

"321. To these numbers, which are peculiar to my situation, must be added the sedentary amongst the remaining part of the population, —the literary, persons of a delicate mode of life, females in general, tailors, mantua-makers, and the youthful inhabitants of the schools.

"322. Nor is sedentariness the only cause of the Mimoses, the operation of which is peculiarly frequent amongst the poor of Notting-

ham. I have noticed the frequent occurrence of the Mimosis Decolor in cooks and housemaids. The same remark applies equally to those persons who are much engaged in 'ironing,' and, of consequence, much confined to an atmosphere overheated by stoves for the purpose of quickly drying the articles subjected to this process.

"323. To this view of the causes of the Mimoses, peculiar to a manufacturing town, may be added the baneful influence of a confined and impure atmosphere, and an indigestible and poor diet,—an influence which we learn to estimate more perfectly, by adverting to the impediment they afford to our attempts to cure, and to the beneficial effects of the country air and exercise, with a proper and nutritious diet.

"324. A certain activity of the body would appear to be necessary to insure the peristaltic movements of the intestines, and, in consequence, the propulsion of their contents. During sedentariness, these movements are probably retarded, the alvine evacuation becomes more scanty or less frequent, and the intestines remain loaded.

"325. From this loaded state of the bowels, their functions, and those of *all* the chylopoetic viscera, most probably become deranged. The alvine contents become disordered merely by delay; and their presence induces, in its turn, a disordered state of the functions,—secretions or actions,—of all the organs contributary to digestion, and at length of other organs more remotely situated in the animal frame.

"326. The functions of the parts within the *mouth* become first obviously disordered. The secretions become morbid; the tongue becomes loaded and swollen; the gums red and tumid; the breath tainted; and the saliva sometimes profuse and offensive. The *complexion* and the *skin* become morbid, and there are the appearances observed in the Mimosis Acuta, or the Mimosis Decolor. The condition of the complexion and skin varies with the state of the original disorder, and with that of the tongue and internal mouth, of which it affords, indeed, an *index*. With the state of the mouth and skin, that of the secretions and other functions of the whole course of the *alimentary canal* and the contributory digestive organs,—the *liver*, the *pancreas*, &c. may be *presumed* to be all morbidly affected. Digestion is variously deranged; the contents of the bowels become unnatural; and thus *reciprocally*. According to the state of things, nutrition is impaired, or the sensations are uneasy and painful.—To term these disorders stomachic, intestinal, hepatic, or bilious, would alike afford partial and inadequate views of this comprehensive subject. As co-existent or subsequent links of this chain of sympathies, the functions of the *brain*, *heart*, *respiration*, *stomach*, *intestines*, *uterus*, *bladder*, *&c.* become variously affected. The *muscular system* and the *senses* also suffer in different instances. And nutrition, absorption, and secretion, are impeded or impaired.

"327. From this view of the subject, the character of the *Mimoses*, § 1, may be deduced. And the recurrence of this word leads me

once more to apologize for the introduction of a new denomination for these diseases. I have been induced to adopt this term, first, to prevent a great deal of circumlocution; and, secondly, because I could find no other in use, which was not objectionable from implying some hypothetical view of the subject. These motives, I trust, will appear sufficient to justify the innovation. I can at least conclude in the words of Morgagni,— "Longe mihi potior cura est veritatis quam novitatis."

We have been obliged to pass over the several sections on the complications and diagnosis, and on the treatment of the different forms of the mimoses; but we ought not to do this without observing, with regard to the former, that they are necessary to complete the description; that they concur in presenting that extension of the views of Dr Hamilton, Mr Abernethy, &c. to which we have alluded in the commencement of this review; and that they furnish many valuable and original observations on the discrimination of these affections, of the utmost importance to the medical practitioner. With respect to the practice, although this part certainly does not present much of novelty, yet the plan or mode of treatment proposed appears in every part judicious; and the observations on diet, sponging, sleep, &c. and on the remedies for the local affections or other complications, deserve an attentive consideration.

V.

An Enquiry illustrating the nature of Tuberculated Accretions of Serous Membranes; and the Origin of Tubercles and Tumours in different Textures of the Body. With five Engravings. By John Baron, M. D. Physician to the General Infirmary at Gloucester. 8vo, pp. 307. Longman and Co., London, 1819.

This is a highly important work. It contains an accurate and circumstantial description of a very painful chronic affection of the abdominal viscera, of which no systematic account has hitherto been given, although isolated cases of it are to be found in the works of the older writers. But this is not all. On the subject of tuberculous and other morbid growths, it unfolds original views, which promise to shed new light on the whole range of those obscure chronic diseases usually denomi-

nated cachetic, and to add materially to the science of general pathology.

In point of fact, Dr Baron has combined a pathological with a strictly practical treatise; a species of combination which we always look upon with pleasure. At the present day there seems to be a disposition, in the profession at large, to undervalue matters of doctrine, and to study only the naked results of experience, unadorned by any speculative opinions whatsoever. Such a disposition, we own, is very praise-worthy in the majority, and, to a certain extent, very favourable to medical improvement; yet, on the other hand, it is highly expedient that some adventurous intellect should now and then rise up amongst us, fitted as well for the task of combination as for that of observation, and gifted with the power not only of recording facts, but of eliciting from them scientific views, or of engrafting upon them fundamental principles. Unless this be done, unless the elements of experience be made available to the establishment of rational theory, the healing art, divested of its rank as a science, must in the end be reduced to mere *tact* and empiricism, and be devoted, like the "medecine expectante" of the French, to the short-sighted purpose of prescribing for symptoms, without any ulterior consideration, either of the proximate cause, or probable consequence, of any given disorder.

Whoever examines the reigning pathological doctrines, so far as they influence modern practice, must readily discover three distinct sects, or classes, into which the medical world is at this moment divided. One class believe that the liver is of transcendent importance, both in health and disease; and that almost all maladies are owing, more or less directly, to derangement of its functions or structure. The next, and by far the greatest number, maintain that every ailment, whether acute or chronic, is caused by some disturbance or loss of equilibrium, in the vascular system, such as undue quantity, preternatural velocity, or increased momentum of the circulating fluid, or their contraries. Thus every morbid symptom is referred to increased or diminished action of the sanguiferous system. The third sect is, we believe, very inconsiderable in point of numbers; but their deficiency in this respect is made amends for, partly by the zeal of their leaders, and partly by the credulity of their youthful proselytes. According to them, it is neither to the liver, the digestive organs, nor yet to the circulating system, that we are to ascribe all diseases, but to *the nerves*; and especially to their organic center the spinal cord. Let the disease be typhus or tetanus, asthma or enteritis—no matter!—it is equally account-

ed for, on their hypothesis, by the morbid state of the nerves of the part affected, which are assumed to be irritated at their origin by sanguineous determination and congestion, because a few hours after death (we should say from the effects of venous gravitation in the supine position of the corpse) they betray unusual vascularity at their exit from the vertebral column!

Since every texture and almost every organ of the body thus enjoys its share of consideration, it strikes us as not a little remarkable that the lymphatic absorbents have hitherto been excluded from the researches of our pathologists. Of the impropriety of this exclusion we took occasion to express our sentiments last year, when examining the very able work of Dr Parry;* and subsequent reflection has only tended farther to confirm us in our opinion. One might almost imagine that the lymphatics enjoy a sinecure in the animal economy, when they are not only thus overlooked, but when we find Professor Magendie, one of the best informed physiologists of the day, denying even the absorbing power which has heretofore been, by common consent, ascribed to them!

Dr Baron has now supplied this unaccountable defect in pathology. He has demonstrated, by such evidence as the nature of the subject admits of, that many chronic and cachetic disorders have their primary source in the lymphatic system and its appendages. Not that he objects to the received doctrines of disease in a general way: he only contends that when they are unjustifiably extended, or too exclusively applied, they cramp our inquiries, and sacrifice to fond illusions of simplicity, that comprehensiveness which truth and nature require. After this general statement of Dr B.'s principles, we shall proceed to examine his volume more particularly.

The first part of the work is occupied with an account of that chronic abdominal disease we formerly alluded to. It appears to be of a most insidious and fatal character: and unless prevented or arrested in the early stage, by the vigorous use of remedies, it soon arrives at a height which all the resources of our art, though ever so skilfully directed, cannot cure.

Dr Baron seems to think that it is not of rare occurrence; and that it affects females more frequently than males. It generally comes on with tenderness and distention of the abdomen, together with nausea and vomiting; bowels for the most part costive, but frequently loose.—At this stage the nature of the disease is seldom suspected, and, consequently, the oppor-

* Ed. Med. and Surg. Journ. Vol. XV. p. 113.

tunity of doing good is too generally lost. The progress of the affection is described as follows:

"The bowels become more and more irregular in their action. The tenderness and swelling increase. The appetite fails: the pulse acquires greater velocity: the features look sharp and contracted: the countenance becomes pale or sallow: the lips parched and skinny: the tongue, sometimes of a bright colour, resembling what is seen in diabetes: at other times it is covered with a thick whitish mucus. The flesh and strength decay rapidly; and I think I have seen greater emaciation in this disease than in almost any other. The skin, except towards the last stage, is for the most part dry and scaly: the urine small in quantity, occasionally clear, more frequently otherwise. If a cough has not existed from the beginning, it is very apt to occur about this time; but this is by no means to be considered as a diagnostic symptom: its existence depending, as will hereafter be shewn, upon the spreading of the disease to the pleura, and the thoracic viscera." p. 19.

The author goes on to inform us, that, if the abdomen be carefully felt at this period, it will communicate to the touch the sensation occasioned by a solid tumour. And this tallies exactly with the feelings of the patient, who, when racked with the excruciating pain that attends the ulterior stages of this complaint, frequently exclaims that all his bowels are bound up together as it were "in a napkin." In addition to this violent pain, a "*broiling heat*" at the stomach is very frequently complained of; and there is an insatiable desire for liquids, although they are often rejected by vomiting. In some cases the matter ejected from the stomach, for several days before death, is stercoraceous. In several instances serous effusion into the cavity of the abdomen takes place to a greater or less extent; but when the fluid thus collected is drawn off by tapping, the relief that follows the operation is by no means considerable. On the contrary, in two or three hours the broiling heat and pain of the abdomen return: all the bad symptoms are henceforward exasperated, and the patient expires in a state of the greatest misery and exhaustion, obviously from the disease having attacked, and, in the end, completely blocked up, the channels of nutrition; namely the chylopoetic organs.

We shall subjoin his account of the appearances on dissection in one case. It may stand as a specimen of the whole, and illustrates very forcibly the nature of this disease.

"On opening the belly, it was found that the whole of its contents adhered to each other, and to the cavity, in such a manner as to form apparently one solid mass. None of the viscera could be distinguished till the thickened layers of the peritonæum were torn

from their adhesions. It was absolutely impossible to do so from the intestines, for there the thickening and adhesions had proceeded so far as to render any attempt at unfolding them impracticable. The intestine itself had undergone a remarkable change: after peeling carefully the thickened and granulated peritonæum from a portion of its surface, it was found to have been deprived of its healthy texture. It had lost its tenacity, and it appeared like a thin transparent membrane, which had been macerated in water; and it tore on the slightest violence being applied to it. The mesentery and its glands were in a very diseased state. The latter were about the size of almonds, and had much of the same appearance when cut into." p. 25.

We ourselves met with a case of this disease a few years ago, and were somewhat puzzled at the time to what class to refer it. The symptoms before death and the appearances on dissection corresponded pretty accurately with those which Dr Baron has enumerated. On looking into our notes, we find it stated, that the intestines were so deformed and bound together, that it was not till after studying the relative situation of the parts, that we were able to tell the different portions of the canal from each other. The omentum was thick, indurated, knotty, and glistening, and greatly resembled a confused mass of diseased cartilage. The mesentery also was greatly changed: it had been converted into a solid semitransparent mass, nearly two inches in thickness. The mesenteric glands were very much enlarged, and otherwise diseased.

Dr Baron is firmly convinced that this agglutination of the abdominal contents is entirely of a tuberculous character, and is not caused by inflammation, acute or chronic; for although pain is severely felt at all periods of the disease, it did not, in any of the cases he saw, appear to be the result of well ascertained inflammatory action. Indeed, he gives proofs that inflammation only supervened as a consequence, not making its appearance until change of structure, both in the peritonæum and mesentery, had proceeded to a great extent. For these proofs, however, we must refer to the work itself.

The complaint with which this disease is most liable to be confounded, is ascites; but the diagnosis may be founded with sufficient accuracy, upon the sense of *broiling heat* in the stomach, the nausea, retching, and extreme emaciation which always attend the tubercular accretion of the peritonæum. The inconsiderable and fleeting relief obtained from tapping, forms also another diagnostic mark of great consequence.

In the treatment, Dr Baron has used a great variety of remedies, such as general and topical bleeding, blisters, purgatives, and opiates; but the relief they afford, he thinks, is not

more than must naturally arise from the temporary suspension of the pain, caused by the attacks of inflammation during the secondary stages of the disease. Mercurials he has pushed to a very considerable extent, but he conceives it is only by their evacuant properties, (upon the principle just laid down,) that they are ever productive of benefit. Upon the whole, it seems altogether a hopeless malady, (unless it be combated at the very onset:) we shall therefore take leave of it, and proceed to give an account of that part of the volume which is strictly pathological, and which, we apprehend, will afford to our readers more interesting matter for reflection.

The origin of tubercles, tumours, and scirrhous disorganizations, (to which every part of the body is occasionally liable,) is a subject of very great obscurity. Most writers ascribe them to interstitial deposition; that is, to the effusion of coagulable lymph from the blood-vessels. And the power which the lymph so deposited has of becoming organized, is supposed to explain the progress and peculiarities of these morbid growths. But Dr Baron maintains, that neither the physiology nor pathology of the vascular system countenances such an hypothesis. It is impossible to conceive the deposition of a coagulum, or any effusion of fibrine to take place, except through the intervention of inflammation; and he puts it to the reader to say, whether there are not almost daily found cysts containing fluids and substances of various kinds, imbedded in the viscera, or attached to different parts of the body, when no previous inflammatory symptom existed. He asks whether the phenomena that occur during the progress of the cases just referred to, do not differ totally from the phenomena of any species of inflammation with which we are acquainted. He contends further, that tubercles in the lungs are not the result of inflammatory action, but exist prior to it; and that scrofula in its ordinary forms manifests itself in lymphatic obstructions and tumefactions, long before other changes occur. We quite agree with him that the very existence of a predisposition to such disorders proves something previously wrong in our frame; and hence there appears a great deal of fairness in his inference, that inflammation merely converts the latent into an active disease. In concluding he observes,—

"The remedies which subdue inflammation in other cases do not remove these complaints; which we have every reason to believe they would have done, had increased vascular action been alone concerned in their production. In phthisis pulmonalis we daily witness melancholy events of this kind; and similar disappointments in the treatment of the tuberculous disease in the peritonæum, first led me

to distrust the doctrine which gave inflammation for its cause." p. 121.

Since the author wholly excludes the agency of inflammation and consequent lymphy deposition in forming the tumours referred to, our readers will naturally ask how he accounts for their existence? We may tell them in a few words his entire hypothesis. He considers that *hydatids* give rise to every morbid growth, and that these bodies undergo various transmutations which, in effect, constitute tumours of every sort of texture and degree of solidity. All the varieties of tumour, whether encysted, steatomatous, or cancerous, he thus resolves into hydatids in different stages of transformation. The limpid contents of these bodies is soon converted into substances of a very different character, by a change progressive but not uniform. This change, he says, can be traced with accuracy only in the larger hydatids, and he thus delineates its progress:

"— it commences with an opaque spot which advances in some instances with rapidity; in others more slowly, and ultimately renders the coats (of the hydatid) thicker, and destroys their contractile power: but no regularity is observed in this process, and the morbid changes proceed in various ways. The conversion is sometimes into a substance resembling cartilage, possessing both its density and colour; again, signs of ossification are seen in the coats of the hydatid, while its contents retain their original character; but more frequently the latter are changed, and assume a vast variety of appearances. Most commonly a pulpy kind of substance, resembling scraped cheese in appearance and consistence, is met with. Sometimes a fluid resembling cream is found: at other times it is dark-coloured, like a mixture of blood and water; or it may be transparent and glairy like the white of an egg. With these, gritty or earthy concretions are frequently found."

"It occasionally happens when a cluster of hydatids have grown together, and when in the progress of their conversion they have formed a large encysted tumour, that punctures or incisions into different parts of the mass, will afford many of the varieties of contents that are mentioned above. I remember to have seen this in a very interesting case that I had the honour of attending with Dr Jenner, at Cheltenham. By puncturing the abdomen at three different points, before death, we got a glairy fluid, a dark-coloured one, and a thick cream-coloured matter. After death, it was found that the immense tumour which filled the abdominal cavity, and caused dreadful distress from its distention, sprung from a small root or pedicle, which grew from the right ovary. The original hydatical structure, in some places, was very visible; but in others, besides the peculiarities already marked, we found portions of the mass which had acquired the character and appearance of a scirrhous tumour."

"The whole of the morbid growth with its *various contents and textures*, was free from adhesion with the surrounding parts, except at the point already mentioned, and where the punctures had occasioned inflammation and attachment, between it and the peritonæum."

"I have seen, likewise, a case where the section of a transformed hydatid exhibited a series of concentric laminæ, resembling very much the appearance of a urinary calculus." p. 93–95.

It is not only by morbid dissections of the human body that the author has been led to these conclusions, but by experiments and observations on the lower animals, made in conjunction with Dr Jenner. It has been ascertained by the last-mentioned celebrated individual, that when young rabbits are kept on food that supplies imperfect nourishment, their livers soon become studded with hydatids. These he has been able to trace through all their gradations,—from the first inspissation of their contents, up to their final conversion into tubercles of varying size and hardness. In the lungs of a young heifer, also, he has found clusters of tubercles, some of which, when cut into, displayed a family of hydatids. He also ascertained that the kind of pork which in ordinary language is called *measly*, possesses a similar morbid structure; the measly appearance being caused by small *hard* hydatids diffused throughout the cellular membrane of the hog.

It thus appears that *hydatid* is an improper appellative for those peculiar substances known by that name; as it is only appropriate while they continue in their watery stage, but does not apply during their successive transformations.

We shall extract one more passage on this point, not only because it renders the author's doctrine more concise and intelligible, but because it makes us acquainted with his views on the subject of cancer.

"The progress which I have attempted to describe in the formation of tubercles and tumours is sometimes presented to our observation in a very satisfactory manner on the outward parts of the body. Small circular vesicles are often seen growing on the edge of the eyelids. Their contents at first are quite liquid. After a time a change takes place, and a melicerous, or atheromatous, or cartilaginous tubercle may be formed. On the same eyelid, at the same time, these facts may be exemplified. One tubercle may have a watery fluid within a thickened cyst. In another, the cyst may be unchanged, while the matter contained in it is very much so. Ultimately, a complete destruction of the hydatical character may be observed, and a hard tubercle substituted in its stead."

"When ulceration is by any means induced in parts where tubercles exist, the ulcer in general assumes that appearance which is termed

cancerous, as it is the peculiar arrangement of the elementary parts of the morbid structure which occasions the characteristic marks of the ulcer in question. What I refer to is very well seen when it attacks the lip. As the ulceration proceeds, the unequal granulated surface is more and more visible, and the tuberculous structure of the affection may be demonstrated by the appearance of distinct circular bodies projecting from the diseased surface. The examination of this complaint by the touch, as well as by dissection, very plainly proves what I have described; and the ulcerative process taking place in parts whose structure is altered by disease, cannot lead to a healthful termination, till the diseased part is removed." p. 256.

We have thus given an outline of Dr Baron's theory, omitting, of course, the greater part of the facts and reasonings by which he seeks to confirm and illustrate it. We have no hesitation in saying that it is highly ingenious, and that the author deserves the greatest credit for having presented it to the profession. Of its substantial correctness, however, we would be understood to speak with much more uncertainty. No doubt we are disposed to receive with the greatest respect and attention whatever is sanctioned by an intellect so sober and philosophical as Dr Jenner's,—(for our author admits, with laudable modesty and candour, that the first hint of these new views was received by him from that eminent physician;) but still it behoves us to be cautious of admitting opinions so novel. Such is the difficulty of establishing medical truth, and such the risk of all attempts at generalization being either premature or fanciful, that we think we should not discharge our duty were we not to put our readers, and especially the younger part of them, on their guard against this, as well as other new theories. While we exhort them to read and to study Dr Baron's work, we would not have them to adopt his opinions, until future experience shall have pronounced upon them. General principles may be unfolded by the genius of one, but it is only by the industry and observation of many that they can be ultimately confirmed. Nothing is more derogatory to professional character than to be hurried away by every new physiological or pathological speculation. This is the error to which the young are chiefly liable: they are apt to speak of established doctrines in the tone of Moliere's mock-doctor—"*nous avons changé tout cela*,"—and to fly from novelty to novelty; until at last, after repeated disappointments of their own creating, they probably settle down into a cold scepticism, that doubts or despises every thing connected with medical science!

Dr Baron has laboured to remove the whole class of tubercles

and tumours from the pale of the sanguiferous system, and to make them over to the lymphatics. But he has hardly succeeded in accomplishing the transfer so satisfactorily as we could have wished. Even if we admit his theory to the full extent, if we admit, for instance, that all morbid enlargements are merely transformed hydatids, still it will remain to be proved that these hydatids belong to the absorbent system. There can be little doubt that the absorbents are the sole instruments by which are effected the transmutations he describes;—that they are the agents by which a watery vesicle is converted into a solid tubercle;—but no evidence has been offered that hydatids, on their primary appearance in the system, belong to one texture of the body more than to another. In fact their origin is extremely obscure. They are generally supposed to be living animals, and are classed as such by Cuvier among the tape-worms. They are often generated in the very substance of the different viscera of man and animals. If these vesicular animals are the products of germs swallowed with the food, they must be deposited by the circulating vessels, and the lymphatics can have nothing to do with their collocation,—far less with their primitive formation. Certainly De Haen, in his "Ratio Medendi," and also Boerhaave, have referred hydatids to the lymphatic system; and Dr Baron shelters himself under their example. But we greatly suspect something more is requisite than the authority of great names to make any questionable medical doctrine pass current at the present day.

We make these observations in the spirit of doubt, rather than of actual disbelief: for, upon the whole, we ourselves are inclined to go in with the author's theory, and to think that, most probably, hydatids and tubercles have a closer connection with the lymphatics than with any other tissue of the body. All we mean to convey is, that the proof of this, adduced by our author, is extremely slender and unsatisfactory. We trust he will take our strictures in good part, and reconsider the subject ere he puts forth the subsequent part of his work.

We are glad, before concluding our analysis, to recur once more to practical matters, after so much disquisition on points of theory. We greatly admire the author's views on chronic and scrofulous disorders, and the happy boldness with which he has brought some homely though forcible analogies from the vegetable kingdom, and even from the economy of the lower animals, to illustrate these maladies. Nothing, we believe, is more baffling to the physician than that cachetic state of the system which is expressed negatively by the term "being out of health." Patients in this state move about from day to day, pining in

atrophy, and gradually getting more weak. They are flurried by the slightest exertion; their sleep is disturbed; their appetite fastidious rather than bad; their tongue in the morning coated with yellow; their skin dry, scaly, or pasty; their bowels torpid and flatulent, their dejections dark; and their urine very often high-coloured and turbid. All these symptoms betoken defects in the nutritive system, which will go on increasing until they have produced the most serious disorganizations, unless we attend to, and remove them, in time—by rectifying the various secretions of the alimentary canal,—by freeing the mouths of the lacteals from obstruction,—by regulating the diet,—by looking to the skin and promoting the healthy action of its extreme vessels—in short, by preserving the *fountain of nutrition* in full play, and free from all noxious contamination.

"Let us," says Dr B. "notice what is seen in the vegetable kingdom when trees grow languidly,—when they are covered with parasitic plants and animals,—when their bark is rough,—when they imperfectly put forth their flowers and their fruits,—what do we infer, but that soil or situation, or the conduits through which the plant is nourished, are at fault? Under such circumstances, how does the skilful gardener act? He clears out the roots, supplies manure, removes the parasitic plants and animals that have fastened upon the epidermis; and if the disease has not proceeded too far, he is rewarded by a healthful and vigorous growth."

"The analogy between animals and vegetables, and their diseases, as far as they depend upon that part of their system which they have in common, is very complete. The comparison which has been instituted may seem somewhat coarse, and not quite applicable to the complicated pathology of man and the higher animals; but this prejudice will vanish when it is closely examined. It may contribute to this end, to give our attention for a moment to such facts as the experience of our stable discipline affords. Examine a horse out of condition, observe his harsh scaly hide closely binding his flesh,—his cracked heels,—his poor emaciated appearance,—his feebleness, his bad wind, and his unfitness for labour. See him sweating easily, and drying with difficulty, and his food passing from him in an undigested state. Look at the same animal after the extreme vessels on both surfaces have been set free, and brought into a healthy state,—the internal by purging, and the external by the well-applied labour of the groom. See how quickly and steadily goes on the process of digestion and assimilation,—how the skin becomes soft and pliant,—how the animal acquires flesh, and strength, and spirit, and energy, greater far than he ever attains in his natural state of existence;—how all appearances of disease vanish;—and how he becomes master of those wonderful powers, which astonish us in the hunter or the race-horse!

"From what may be observed in our stable, we may advert to

what we witness in those men who are trained either as prize-fighters, or for other extraordinary feats of strength or activity. Their preparations for training, and all that they do in that state, correspond in every respect with what has been described, and well establishes the doctrine which these remarks are meant to illustrate. All impurities are eliminated; all the viscera and their emunctories are, as it were, purged by an attenuating diet, and laxatives, and sweating. Then by judicious and nutritious feeding, and exercise, and friction, the body is brought into a state capable of enduring the most extraordinary exertions." p. 153 to 155.

The doctrine here laid down is exceedingly just, and the practical inferences it suggests deserve the greatest attention. We ourselves have acted upon this very doctrine, (though led to it by a species of reasoning somewhat different,) and in more than one instance, in the space of a few weeks, have succeeded in restoring to firm health, a poor, emaciated, hypochondriacal being, whom even the very winds of heaven seemed to visit too roughly, and who, for months before, had been drooping under a latent ill-defined sort of indisposition. In these cases, our only remedies were brisk purgatives; and, contrary to the fears of his anxious relatives, who asserted that "such rough medicines would tear him to pieces in his then weak state," the patient became sensibly exhilarated after every evacuation of the primæ viæ; and in no long time, by dint of firmness and perseverance in the purgative plan, recovered his wonted flesh and vigour. We can assure our readers that it requires no little resolution both on the part of the patient and the physician, to persist steadily in the use of evacuants, in spite of that prostration of strength which *seems* so forcibly to contra-indicate their employment.

One of the most interesting parts of the volume is a communication from the venerable Dr Jenner on the *sickening plan* of treating certain local affections that depend on a constitutional taint, such as scrofulous and scirrhous indurations, and other chronic obstructions. The passage is too long to extract, but we shall put our readers in possession of the leading facts.

A gentleman affected with scirrhous tumours, which had defied all remedies, was ordered to a warm climate, in the hope that his malady might derive benefit from the change of air. He set sail; but owing to boisterous weather, he was no less than three months in reaching his destination. During all this time he was sea-sick, and arrived greatly enfeebled and emaciated. On looking for the scirrhous bodies, however, they were gone! they had been absorbed.

A lady of Cheltenham had a tumour in the right mamma,

which Dr Jenner, conceiving it to be scirrhous in its nature, advised to be immediately extirpated by the knife. This she refused to submit to, and went to London, where she placed herself under the care of another practitioner. The latter gentleman gave her nauseating doses of tartar emetic daily, so as to keep her always not only sensibly, but distressingly, sick. She grew thin and somewhat weak, but in the end the absorbents removed the whole of the disease from the breast, which remained for many years afterwards quite sound. Dr J. has forgotten the exact time occupied by the curative process in this case; but, he says, it "was certainly not to be considered as tedious."

A young woman who had quitted the country to reside in London became affected with ill health, which obliged her to return to her native air. When Dr Jenner saw her he found her labouring under cough, emaciation, and, in short, all the usual symptoms of tubercular phthisis very strongly marked. He set down the case as hopeless. Nevertheless, "she completely recovered under the *sickening* plan, which she went through with great resolution." The medicine employed was three parts of tincture of squills, and two of tincture of digitalis, given in doses of twenty drops thrice a-day. She continues permanently well, and is now married.

On these interesting and important cases, Dr Jenner reasons in the following manner:

"As we have been for ages in total darkness respecting the means of removing tubercles from an internal organ, when formed to any extent, may we not hope that the little glimmering which this seems to let in upon us, may lead to something beneficial to humanity? And without putting theory to the rack, may it not be supposed that the stomach and intestines, being thus deranged in their ordinary functions, and the supplies for the absorbents becoming scanty and deteriorated, they the more readily seize on such bodies, not those only that are absolutely extraneous, but which come so near that point, as tubercles?"

"If we take a retrospective view of the most popular remedies hitherto employed in these pitiable maladies, shall we not find that they consist of such things as produce a nauseating effect on the stomach, either from immediate contact, or secondarily, through their influence on the brain? One might name a great variety; *e. g.* foxglove, squill, nitrate of potass, sulphate of zinc, sulphate of copper, conium maculatum, sailing, swinging, &c. &c. Remedies of this description have all in their turn risen to high reputation, and again sunk into disrepute. All of them seem to have done some good, and to have given a little flattering check to the progress, probably by inducing sickness; but the mode of exhibition, if we may be allowed

to draw an inference from the preceding cases, was too limited; the interval of freedom from nausea was too long." p. 162.

This explanation is exceedingly plausible, and perhaps just; but it is liable to some ambiguity. For instance, those who believe tumours and tuberculous growths to arise from topical increased action of the sanguiferous system, may explain the efficacy of the sickening plan, on *their* principles, by referring it to the influence of the medicines on the vascular system. Every one knows, that nothing has greater power in subduing increased action of the heart and arteries, and in diverting morbid determinations of blood from any part of the body, than vehement and long continued nausea. We ourselves have very generally remarked, that the occasional lancinating pains which attend tumours of a cancerous nature, are always suspended while the sickness of stomach, produced by medicine, continues. This we take to arise from diminution of the impulse of blood in the tumour itself, and not from any increased activity of the absorbents.

The last chapter of Dr Baron's work contains some interesting remarks on pulsation at the epigastrium, and on vomica. The latter he does not admit to be the result of inflammation, as heretofore supposed: on the contrary, he maintains that the matter is not really purulent, but encysted; and that the cyst, in this case, is analogous, as to its origin and formation, to growths of a hydatical character.

After the opinion we have given at large in the course of our article, it would be superfluous to bestow upon Dr B.'s volume any formal commendation. It must be pretty apparent that we consider it too speculative, perhaps; but, upon the whole, a masterly production; and we look forward to the promised sequel of the work with a very considerable degree of interest.

PART III.

MEDICAL INTELLIGENCE.

Report of Progress of the Epidemic Fever at Edinburgh, as deduced from the Admissions into the Public Hospitals.

The fever, which began to be epidemic in this city about the beginning of 1817, having for several months past been on the decline, a table of the cases which have occurred in the Royal Infirmary and Queensberry-House Fever-Hospital, from that period to this date, will form an interesting document, as exhibiting a pretty just view of the progress, extent, and decline of the epidemic.

1817.	Cured.	Died.	Total.	One Death in
January,	19	3	22	$7\frac{1}{3}$
February,	17	0	17	0
March,	18	1	19	19
April,	38	2	40	20
May,	34	4	38	$9\frac{1}{2}$
June,	26	1	27	27
July,	33	3	36	12
August,	39	3	42	14
September,	49	3	52	$17\frac{1}{3}$
October,	53	1	54	54
November,	59	6	65	$10\frac{5}{6}$
December,	93	6	99	$16\frac{1}{2}$
	478	33	511	$15\frac{6}{33}$

1818		Cured.		Died.		Total.	One Death in
Jan.	Royal Infirmary,	87		9		96	10⅔
Feb.	———	90		6		96	16
March,	———	91	133	5	9	142	15⅞
	Queensberry-House,	42		4			
April,	Royal Infirmary,	59	130	2	6	136	22⅔
	Queensberry-House,	71		4			
May,	Royal Infirmary,	34	106	2	4	110	27½
	Queensberry-House,	62		2			
June,	Royal Infirmary,	61	133	4	7	140	20
	Queensberry-House,	72		3			
July,	Royal Infirmary,	42	108	3	5	113	22⅗
	Queensberry-House,	66		2			
Aug.	Royal Infirmary,	45	129	2	4	133	33¼
	Queensberry-House,	84		2			
Sept.	Royal Infirmary,	61	117	1	4	121	30¼
	Queensberry-House,	55		3			
Oct.	Royal Infirmary,	80	170	2	7	177	25⅔
	Queensberry-House,	90		5			
Nov.	Royal Infirmary,	53	137	3	5	142	28⅖
	Queensberry-House,	84		2			
Dec.	Royal Infirmary,	73	157	2	9	166	18⅖
	Queensberry-House,	84		7			
		1497		75		1572	21 nearly.

1819.		Cured.		Died.		Total.	One Death in
Jan.	Royal Infirmary,	81	148	2	4	152	38
	Queensberry-House,	67		2			
Feb.	Royal Infirmary,	70	136	3	7	143	20⅓
	Queensberry-House,	66		4			
March,	Royal Infirmary,	64	136	1	3	139	46⅓
	Queensberry-House,	72		2			
April,	Royal Infirmary,	61	126	3	3	129	43
	Queensberry-House,	65		0			
May,	Royal Infirmary,	58	131	2	4	135	33¾
	Queensberry-House,	73		2			
June,	Royal Infirmary,	38	75	1	3	78	26
	Queensberry-House,	37		2			
July,	Royal Infirmary,	22	65	0	1	66	66
	Queensberry-House,	43		1			
Aug.	Royal Infirmary,	11	47	1	2	49	24½
	Queensberry-House,	36		1			
Sept.	Royal Infirmary,	19	52	0	1	53	53
	Queensberry-House,	33		1			
Oct.	Royal Infirmary,	11	41	1	1	42	42
	Queensberry-House,	30		0			
Nov.	Royal Infirmary,	19	35	1	1	36	36
	Queensberry-House,	16		0			

It is believed that, during the first six or eight months of 1817, a smaller proportion of persons affected with fever were admitted into the hospital than were afterwards received when the Society for the Relief of the Destitute Sick began to take a more active part in endeavouring to check the progress of the disease; and in the month of December 1817, and January and February 1818, a considerable number of patients were unavoidably refused admittance for want of room; and, for the same reason, even after the opening of Queensberry House, the admission of patients was not unfrequently postponed for a day or two. To what extent the fever may have prevailed in Edinburgh at any former period, we have not sufficient documents to shew; but, on the present occasion, there is no doubt that the zeal and activity of the Society for the Relief of the Destitute Sick, and of the Committee for Checking the Progress of Contagious Fever, has been the means of bringing to the hospitals many more persons than would have spontaneously come, and that the proportion of fever cases in the hospitals to the whole affected with the disease, has been much greater now than on former similar occasions; but certainly nothing equal to it in point of extent has before occurred, so far as the Royal Infirmary is concerned. During a period of fifteen months, from the 1st of March 1818, to the 30th of May 1819, the average monthly number of fever cases in the two hospitals was 139; but since the month of June this year, the decrease has been great and steady, in so much that the disease may now be considered as nearly to have ceased to prevail as an epidemic. And this is the more probable, as, during this year, a similar decrease has taken place in various parts of Ireland, and, it is believed, still to a greater extent in Glasgow. For though the cases of fever in the two hospitals are still more numerous than during the first eight months of 1817, that must in a great measure be ascribed to the continued attention of the association for checking the progress of fever, and to the increased desire of the poor to avail themselves of the benefits of the hospitals.

1st December 1819.

Account of the Epidemic Fever, as it appeared at a Village in Yorkshire, by J. Terry, Member of the Royal College of Surgeons, London.

HAVING just received the Edinburgh Medical and Surgical Journal for April 1819, I observe, in Dr Hunter's paper on Continued Fever in Leeds, that he wishes an account of the prevailing fever in more remote situations in Yorkshire, to be transmitted for insertion in your valuable publication. This is a small and not a very populous market town in the North Riding of this county, about fifty miles from Leeds and nine from Richmond.

As my information is merely to show, that typhus fever is not confined to large crowded cities nor dirty lanes, on the nature and treatment of that disease I shall offer few or no remarks. In August 1819, an Irish regiment passed through this place, and were obliged to leave a soldier ill of the typhus fever, who fell a victim to it in a few days afterwards; but I know no particulars of the case, as the poor man did not come under my immediate attention.

Although few lives have been lost, we have never been entirely free from this disease since the above date, and it broke out soon after the Irishman's death in cottages adjoining, and in that end of the town it remained for several months. Ere long, however, the contagion was communicated to the most distant parts of the place, and situations the most remote. We have not many dirty householders, several of whom escaped, while the most cleanly and respectable farmer's family became infected with the disease. *

We seldom saw more than one or two families afflicted at the same time; nor have we been entirely free from the disease since the Irishman's death. The country is called healthy on account of being open and hilly. We are upon limestone. The adjoining villages have not escaped this contagion, more especially Wensby, a mile distant, where the symptoms, I think, have been more urgent. I have seen most of the remedies recommended for the last few years fully and fairly tried. I have seen them all succeed; I have seen them all fail. I always bleed at the onset when the patient complains of much pain, wherever situated; then open the bowels very freely with calomel and jalap, which, in some cases, puts an end to the disease; if not, calomel and opium at bedtime, and salines with antimonials during the day. If you think this short report worth insertion it is much at your service, and may encourage other country surgeons to obey Dr Hunter's request.

P. S. I might have added, that the seasons never seemed to influence the disease. The disorder continues much in the same state as for the last five years.

Leyburn, 18th May 1819.

CORRESPONDENCE ON SMALL-POX AND VACCINATION.

Observations upon the Effects of Vaccination, by William Crane junior, M. D. formerly President of the Royal Medical Society, Edinburgh, Boston, Lincolnshire.

WHOEVER reads papers to which the names of Thomson and Hennen are attached, cannot fail to peruse them with interest and benefit. Mr Hennen's paper, in the Edinburgh Medical Journal for October 1818, "On Eruptive Diseases," is highly interesting, not only from the accurate and elegant manner in which the symptoms are drawn up, but also on account of its affording, I should say, undoubted evidence of the occurrence of variola, much modified, after vaccination. For, although the learned author has declined giving that, or any other name, to the disease he describes, it contains too much evidence to form a contrary opinion. Variola is a disease that assumes a variety of forms, even in those who have not undergone vaccination. Every medical practitioner must have observed this upon inoculating different persons from the same pustule. In one, it will produce a very slight fever and a few pustules, which die away early, and leave no marks; in another, the same matter produces a violent degree of fever, copious eruption, becoming confluent, and terminating in the death of the patient; in a third, a mild distinct small-pox; all these varieties appearing in those who have not undergone vaccination. It becomes an interesting inquiry to discover, if vaccination has the power of preventing small-pox, why does it ever fail? And, in those cases

* One of my most deplorable fatal cases was a farmer's (delicate) son at the age of twenty-nine; another son and two daughters narrowly escaped from the complaint.

where it does, has it the power of producing merely a modified disease, or entirely a new one? These questions, of the greatest importance to the welfare of mankind, can only be answered by a complete mass of evidence, derived from many sources, and it is under this impression that I am induced to intrude upon the medical profession my opinions and observations. With respect to the first inquiry,—Has vaccination the power of preventing small-pox? To answer this question in the affirmative, such an immense body of facts are now collected together, and so general has vaccination become throughout the world, where art and science is cultivated, that we need only appeal to each individual, and request him to look over the annals of his own practice, and he will discover that, out of the hundreds he may have vaccinated, very few, if any, cases of failure, have come under his own observation. In the immediate neighbourhood of Boston, I have made many inquiries. Some have answered that they have met with a few cases of failure; others that had not met with a single instance. One gentleman observed, that he had vaccinated three children in one family, but the father, who had never had the small-pox, was obstinate, and would not be ruled; he caught the small-pox; it became confluent, and he died. The children that had been previously vaccinated slept in the same bed with him until within a very short period of his death, but did not receive any disease. Another gave me an instance of a child that was vaccinated and was suckled by its mother, when she had the small-pox, without communicating the disease to the infant. In my private practice, and in the course of my attendance in the General Dispensary of this place, not more than about ten or twelve instances have occurred. In one, the most marked, the disease became confluent, the child was blind, and very large pustules were formed, particularly on the great toe of each foot. A great number of the parents whose children have been vaccinated at the Dispensary, almost from the very commencement of vaccination, have informed me, that they have repeatedly exposed their children as much as possible to the small-pox, without the least detriment to their health. To multiply decisive and striking examples would be an easy task. In short, the proofs have now become so numerous, and so extremely decisive, that we may, without hesitation, affirm that vaccination has the power of rendering the system capable of resisting the attack of small-pox. This, like all general rules, appears liable to an exception, and one to which the anti-vaccinist resorts with exultation. Cases of failure in small-pox after vaccination do certainly occur. Why do such circumstances occur? Vaccination, in the country, is often performed in a very negligent manner, owing, in a great measure, to the difficulty of keeping up a constant supply of lymph. It frequently happens that one arm only is vaccinated, and the pustule is in its progress disturbed, by taking away the matter. This is directly contrary to the rules of the National Vaccine Establishment, for they observe, even when two vesicles are formed, that "One of the vesicles should always be permitted to go through its regular course without being punctured or being disturbed." How much more necessary it is, therefore, when only one puncture is made, that that vesicle should go undisturbed through its course. They further state, "When only one vesicle has been produced, it is prudent to test this case by a subsequent vaccination." This precaution is often prevented by the negligence of the patient; for, satisfied with one vesicle rising, he never sees his medical attendant again. In this part of the country, the Brycean test is seldom or never adopted. This negligence is, in some measure, owing to the zeal of the early vaccinators, whose representations have led the public to suppose it was sufficient to be vaccinated, however carelessly performed. But, after every precaution, vaccination appears sometimes to fail. Dr Monro, in his excellent work, a work worthy the name of Monro, upon Small-pox after Vaccination, has given a

great many instances of small-pox occurring twice, both from ancient and modern authors, and also from his own observation. The memoir presented by Messrs Berthollet, Pinel, and Hallé, to the Imperial Institute, states, that more persons have had small pox twice, than have had this disease after vaccination. Within four miles of this place, a miller of the name of Pocklington, I am informed, upon good authority, had the small-pox twice, and each time very severely. The first was when a child, and the second when he was grown up to manhood; both times the casual small-pox. At Frisknay, a place thirteen miles hence, a man was inoculated, about ten years ago, for small-pox, and had a mild disease. He, during the prevalence of this disease last year, received the small-pox and died. Two children in this town were reported, by their medical attendant, to have the small-pox during last summer for the second time. If, therefore, small-pox can occur twice in the same person, it cannot be a matter of surprise that it should sometimes make its appearance in those persons who have been previously vaccinated. Let us now inquire—Why? It is undoubtedly the property of some constitutions to be peculiarly liable to receive contagious diseases; so that, being in the least exposed to their influence, they become immediately ill. This we constantly observe whenever any contagious disorder is prevalent, for some spend their whole time in nursing and attending upon their sick friends, with the utmost impunity, whilst others, standing by the bedside, or breathing only for a few minutes the air of the patient's room, are affected with the disease. This is often peculiarly manifest in typhus, scarlet fever, measles, and small-pox itself. Some nurses that have previously had the small-pox will, when suckling children affected with this disease, have variolous eruptions and febricula; others, on the contrary, under similar circumstances, remain perfectly free. Hence I am induced to suppose that it is not improbable, in those cases where vaccination has been properly performed, and small-pox has afterwards occurred, that it is in those persons who possess this peculiar predisposition to receive contagious diseases. The many instances of small-pox, when it does occur after vaccination, happening to several members of the same family, in some measure tends to support this opinion. Thus we find, in Dr Monro's work, that three of his children had the modified small-pox. The fourth and fifth cases are those of a brother and sister, as are also cases six, seven, eight, and nine. The case of the gentleman mentioned in this last case strongly corroborates my opinion. "It is worthy of remark," Dr Monro observes, "that this gentleman, when a child, had had the natural small-pox, caught by contagion from his sister." Mr Dawson, in his letter to Dr Monro, says, that out of three thousand five hundred children that have been vaccinated at his surgery, he has met with but a few cases of failure, and "perhaps six or seven of these, too, were children belonging to the same family." I have twice met with similar examples. A surgeon in this neighbourhood informed me that three children, vaccinated about five years ago, and reported, by their medical attendant, to have properly gone through the disease, have lately had the small-pox, and one of them died; but he further observed, that the cicatrix was not so visible upon the arm of this child, as on those of the other children who had a mild disease. The following case, which has come under my care since reading Mr Hennen's paper, will further illustrate the conclusion I am about to draw. Case. Avison Mary, ætat. 40. married, says that she was inoculated for the cow-pock last May. The pustule rose well, and formed a large areola, and she was told by her medical attendant that she had gone properly through the disease. She was not in the least affected with any febrile symptoms or illness during the progress of the pustule. Upon inspecting the mark left by the pustule, it has the well marked appearance of the vaccine cicatrix. This woman has had three children that have just gone through the small-pox. Two of them

I inoculated for cow-pox at the Dispensary, and the following day the eruption of small-pox appeared; having been previously much exposed to it in the neighbourhood for some time. They had a mild small-pox, which did not interfere with the progress of the vaccine pustule. The third child, that was not vaccinated, had the confluent small-pox, and is now very much marked in the face. The mother was also, at her request, vaccinated at the same time, but did not take the infection. On the 12th of last November, being about a fortnight from the illness of her children, she was seized with a severe pain of the head, and the usual symptoms of pyrexia. 13. A small papular eruption appeared this day; pain and fever unabated. 14th, I saw her for the first time since her illness this morning. There is a very considerable redness over the whole surface, and, in various parts of the face and extremities an eruption, having, to the touch, a seedy feel, so peculiar in the early stage of small-pox. The pain of head is somewhat relieved, but she complains of severe pain in the extremities and body; there is still a considerable degree of pyrexia. Belly bound. To have an opening powder. 15th. The febrile symptoms entirely disappeared upon the operation of the aperient medicine. The eruption is now vesicular, with inflamed bases, particularly on the face and arms. 16th. She feels in good health. The eruption on the face has in many places become pustular, with a depression, and some have a small brown scab in the centre. A few more spots have appeared on the arms, which came out yesterday. 17th. She continues well. The pustules on the face are brown, and the vesicles on the arm have dried up without forming matter, and the new eruptive spots have disappeared. 23d. The scabs on the face have fallen off, and the eruption upon the arms have left no marks. Hence, when it is considered the many thousands that have been vaccinated and resist the contagion of small-pox, and the very few that have even the modified small-pox, perhaps it is not improper to form the following conclusions: That there is in some persons a strong predisposition to become infected with contagious diseases, and that this peculiarity of constitution appears to run through the various members of the same family. Further, that in such persons, although vaccination has not the power of rendering the system capable of resisting an attack of small-pox, yet it has the power of converting it into a mild and simple disease, nearly resembling varicella. Having thus stated my ideas respecting the two first questions, I come now to the third. Has vaccination the power of producing merely a modified small-pox or entirely a new disease? This question has arisen in my mind from observing Dr Thomson use the word varioloid. Upon this word I shall presently make a few observations; having first endeavoured to prove that it is not a new disease, but merely the variola in its most simple form. If it were a new disease, then should the matter taken from those labouring under it be incapable of producing genuine small-pox. The contrary of this is well known to be the case, for Dr Thomson states, in his paper entitled "Some Observations upon Varioloid Disease, &c." Edinburgh Medical Journal, Oct. 1818, "That all the cases of mild and malignant small-pox which have occurred in the Castle, were derived from matter taken from Mr Hennen's son." Besides, where is there any example of the contagion of one disease producing, under any circumstances, a new disease, entirely different from itself? If this idea is started from its comparative mildness, might we not as well consider the distinct and malignant small-pox as different diseases? For these reasons I am inclined to think that it is not a new disease, but merely small-pox in its mildest possible form. Why I should object to the term varioloid is, because the termination in *oid* may mislead the medical writers in future ages, if the term syphiloid be retained. For the termination, in this instance, does not imply syphilis in its mildest possible form, but a disease greatly resembling it, much more severe, much more diffi-

cult to cure, the treatment of it essentially differing from syphilis, and certainly arising *from* a *different source*. Hence we may say that syphilis and syphiloid are, in fact, two very different diseases, in almost every respect, which is not the case with the variola and varioloid, for they are certainly generated from the *same source of contagion*, and only differ in the mildness of their symptoms; and this difference is not greater, as I have observed at the beginning of this paper, than what is acknowledged so take place between the mildest and worst kind of genuine small-pox. Hence, instead of employing the term varioloid, I cannot help thinking that modified small-pox, or perhaps *variola vaccinea*, would be more correct. The learned professor has, with great erudition and ingenuity, suggested that varicella "and the modified small-pox are one and the same disease." To prove if this be the case is, to one enjoying an extensive hospital practice, a matter of no great difficulty, for he has only to take the lymph of a person labouring under chicken-pox and inoculate several persons with it who have not had any of these varieties, if they may be so termed, or undergone vaccination, and observe if, in any instance, distinct or malignant small-pox is induced. The small-pox has been very prevalent in this town and its neighbourhood the greater part of this year. Before its appearance, there were several cases of varicella; but since, I find upon inquiry that there have been only a very few instances; and certainly there are several who have had varicella, and afterwards gone through small-pox in the usual manner. There can be but little doubt that mild cases of secondary small-pox may have been considered as cases of chicken-pox; but that variola and varicella are only varieties of the same disease, is a subject that requires considerable investigation before it can be established as a certainty. At present, there appears to me as much reason to consider them as distinct diseases as scarlatina and measles; for these, in some instances, so nearly resemble each other, that it becomes almost impossible to distinguish them.

A Case of Small-Pox, in which two distinct Crops of Eruption were observed. By Edward Turner, M. D. Clerk at Queensberry House Fever Hospital, Member and Annual President of the Royal Medical Society.

At the present period, when new opinions have arisen concerning the pathology of small-pox, any case in the least degree uncommon acquires interest; and on this account I present to the public the following instance of small-pox, during the progress of which two crops of eruption appeared, attended with corresponding constitutional changes.

Though analogous examples may perhaps be found in books, especially in the older authors, yet this is sufficiently interesting and uncommon to be brought before the medical world again.

On the 16th of January 1819, Margaret and Mary Duggan, sisters, the former aged seven, the latter five, were sent to Queensberry House Fever Hospital, under the supposition that they had continued fever, since some of the family had been afflicted with that disease.

The peculiarity alluded to occurred in the younger sister, but notice is also taken of the other for the purpose of illustration. It was thought preferable, for the sake of brevity, to give a condensed view of the case, rather than enter into the more minute detail to be found in our Journal. The children were admitted as patients under the care of Dr Home. I took daily reports of them, which were read to the Professor, and subject to correction or addition; they were taken without the most distant idea of publication, or without the expectation of any thing unusual. The particulars are communicated with the liberal permission of Dr Home, and of the Managers of the Royal Infirmary.

No doubt has existed concerning the nature of the disease; for several excellent judges, among whom were Mr Hennen and Mr Bryce, saw the children, and unanimously agreed that their disease was small-pox. Neither of the children had ever been affected with small-pox, chicken-pox, or cow-pox.

Mary Duggan, when admitted, had ordinary febrile symptoms, and was in the 2d day of fever. Pulse 134; respiration 40; heat 99. 3d day, fever less; dry cough; pulse 138; respiration 40; heat 101. 4th day, catarrh, vomiting, and epigastric tenderness on pressure; pulse 140; respiration 30: heat 102. 5th day, catarrh and fever less; a few papulæ have appeared on the face and arms; pulse 120; respiration 30; heat 99. Fever has here sunk with the appearance of eruption. 6th day of fever, a few more papulæ on trunk and legs, some becoming vesicular; catarrh gone; pulse 90; heat 97. The eruptive fever has now wholly ceased. 7th day of fever, 3d of eruption, very fretful; eye-lids swollen; pulse 144; heat 102. This seems the eruptive stage of the second crop; for, on the following day, a copious papulous eruption covered the whole surface, and fever lessened, pulse being 124; heat 100. First eruption vesicular. Next day (9th of fever), the first crop purulent, the second vesicular in part; fever almost wholly gone. 10th day of fever, maturation in first crop proceeds, the second is altogether vesicular; no fever. 11th of fever, and 7th of first eruption, secondary fever of 1st crop has begun; pulse 126; heat 99. Vesicles of 2d crop contain a puriform fluid. Next day, first crop drying with a central scab; pulse 136; heat 100. Next day, fever gone, as pulse 102; heat 98; 2d crop maturate, and are of good size, except on the face. Next day, no fever; pustules of 2d crop have become horny on the face and arm, without scabbing. Next day, (15th of fever, 8th of 2d eruption), the secondary fever of the second crop seems to have set in, and all the pustules have become horny; skin very hot; pulse 140. This fever remained several days, and then gradually declined. The scabs of the first crop gradually fell off, and the horny elevations of the second by degrees approached the level of the skin, without any cicatrix being left in either case.

No remedies were employed to interfere with the changes going forward; a calomel purge was given on admission; the bowels afterwards remained soluble; when the heat was above natural, tepid sponging was occasionally employed.

The case of Margaret terminated in horny elevations, corresponding to the second crop of her sister.

The children slept in the same bed, and the eruption first appeared in Margaret. From this, when the second and decidedly constitutional eruption was observed in Mary, it was thought that the scanty first crop was occasioned by contact with her sister, and this was only a local affection. This supposition was rendered improbable, from the constitutional changes going on in Mary; but the matter was decided by a comparison of dates. For papulæ first appeared in Margaret on the 17th; on the 18th some were vesicular; on the 19th the papulæ in Mary first were seen; so that one day only intervened between the formation of vesicles in the former, and of papulæ in the latter;—a period too short for inoculation to account for the phenomena.

The cause of disease in these children was traced to the Royal Infirmary; for their grandmother, when convalescent from fever in the Infirmary, had occupied the bed next to a patient very ill with small-pox.

A younger sister of these children had small-pox also, and her disease was the most severe, I presume in consequence of her remaining at home; yet the horny process took place without any scabs being formed.

The child of another person caught the disease, apparently from the same source; and her two sisters, one of whom had been vaccinated four years, the

other twelve months before, slept with her during the whole course of the disease, without the least affection, either constitutional or local.

Case of Second Small-Pox, by Whitlock Nicholl, M. D. F. L. S. &c.

1819, May 15, I visited Mary Davies, a single woman, aged 28, who was said to have small-pox. She told me, that she was inoculated in the left arm for the small-pox sixteen years ago, and that, in consequence of such inoculation, she had two pustules on the inside of the right fore-arm, just above the elbow, two or three pustules on the face, and as many on the neck. She also says, that seven or eight persons were inoculated with matter taken from the spot in her arm in which the virus was inserted, two of whom had very full crops of pustules: and that her brother was inoculated with matter taken from one of the pustules on her right arm. He had a "heavy crop," which left many marks which are now visible. She herself has a mark in the left arm, showing the spot in which she was inoculated, and the pustules, which were seated on the right arm, have left faint marks, pointing out the spots which those pustules occupied. Eight years ago, she nursed five children who laboured under natural small-pox, one of whom died of that disease, she herself not having any illness. The small-pox is not in this town (Ludlow), where she at present resides. On the 3d instant, she went to a fair in a town, ten miles southward of this place; she did not enter any house there, but she rested at a public-house on the road-side, within a quarter of a mile of which house the small-pox reigned. On the 6th instant, she attended a fair eight miles westward of this town. On the 11th instant, an eruption made its appearance on the neck, and afterwards on the face and arms, preceded by lowness, sickness, pain of the head, weakness of the eyes, great thirst. She has been subject to pain at the pit of the stomach for about a quarter of a year. This pain became more violent, just at the time when the eruption made its appearance, but it grew slighter afterwards, and it has since nearly left her. When the eruption came out, the face was much swelled, the right eye being nearly closed. The eruption consists of hemispherical eminences or tubercles, nearly of the size of the variolous pustule, very hard and unyielding, reddish, not *seeming* to contain any fluid; when rubbed with the hand, appearing of a yellow colour, like that of honey, the immediate summit of many of the tubercles having a shining appearance, as if a very minute quantity of clear liquid were on the surface, which appearance, in reality, arises from an extremely small glistening, hard, thin shield, occupying the summits, such shield not being detached, or above the level of the summit, but being as it were inlaid, and itself forming the apex. On puncturing one of the tubercles with a pin, a small quantity of clear lymph came out. The tubercles are very numerous, and very closely set on the outside and back part of each fore-arm and hand, (the inside of the fore-arm being almost entirely free from eruption), around the arms, on the back of the neck, and on the shoulders; the eminences are very small and thickly clustered on the point of each cheek-bone, and on the right palpebra; there are a few tubercles on the breasts, and, she says, that a very few are scattered over the body, and a good many on the legs and feet. There is not any appearance of vesicle, of pustule, or of desquamation. All the tubercles appear to be in the same stage, and of the same duration; there is no appearance of any having declined, nor of any fresh eruption coming forth; there is no depression in any part of any of the tubercles.

I visited her on the 16th, and found that the tubercles had subsided considerably, they being everywhere much less prominent, and more contracted, than they were on the preceding day. On the 17th, I called and found that she was gone on foot to a fair sixteen miles off.

May 21st.—She has just returned from her expedition. She says, that the

walk on the 17th fatigued her excessively; she was "quite spent;" the eruption itched violently, and on scratching it after her walk, a small quantity of clear fluid came out from some of the tubercles, but from only very few. The tubercles have subsided nearly to a level with the surrounding skin; in some parts they are covered with a thin white desquamation; on others there is a minute scale; and where she has scratched violently, there is a very minute scab or crust. On the backs of the hands there is no appearance of scale, or of desquamation, or of crust. She says, that the eruption on the legs, and on the bottom of the feet, went away entirely some days ago; it has disappeared from the face, leaving a roughness of the skin; and a redness of the palpebra is the only mark which the eruption has left on that part. She still has thirst; she has pains in the head, lowness, weakness of the eyes; her appetite is variable. She has not had any increased secretion of saliva. No fresh tubercle or eruption of any kind has made its appearance during her absence. There is no depression, no ulceration, no suppuration in any part of the eruption.

The above statement is as accurate a description of the case as I can convey by words. The case certainly cannot be considered as possessing any of the characteristic marks of varicella. The eruption, up to a certain stage, closely resembled that of variola in an early stage. Having arrived at that stage, it suddenly sunk way, as if rendered incapable of proceeding farther. Is it to be considered as an eruption which had its origin in variolous infection, but which was prevented from going through the several stages of its parent disease, by that peculiar state of the system which previous inoculation had engendered? In short, was it a case of modified variola? I should be inclined to answer this query in the affirmative. Should the above case appear to you to be worthy your notice, you will make any use of it that you choose.

Ludlow, May 23, 1819.

Extract of a Letter from Mr Fosbrook, Surgeon, Welford on the Wey.

THE deaths in the year 1818, from small-pox, in the metropolis, are much beneath what they ever were, since the bills of mortality first appeared. The Report from the Central Committee of Vaccination in Paris is highly interesting. It has been calculated by a mathematical friend of the celebrated Las Casas, that this discovery saves, from a premature grave, 2300 daily through the earth, and that it adds three years and a fraction to human life.

Case of Poisoning by Stramonium: by Benjamin Granger, Esq. Surgeon, Burton-upon Trent. 9th May 1819.

SIR,—A GIRL about two years and a-half old lately died in this town from eating unripe thorn-apple. This is, I believe, the case which Dr Young notices in his letter to you (Vol. XV. p. 154), and the leading particulars of it are as follows: The child ate the thorn-apple betwixt five and six o'clock P. M., on an empty stomach; but the quantity taken could not be ascertained. About six o'clock it was observed to stagger, and appeared as if intoxicated. The real situation of the child, however, was not discovered till half past eight, or thereabouts, when medical assistance was immediately obtained. The symptoms were complete insensibility—dilatation of the pupils—swelling of the under lip—voluntary muscles in a state of great relaxation—respiration hurried—the extremities cold, and the pulse little or none perceptible. The torpor gave place at irregular intervals to severe convulsive fits, during which the child shrieked violently, and the voice was particularly hoarse. Full vomiting was excited, and a considerable quantity of stramonium was thus dislodged from the stomach, but without any return of consciousness or any abatement of the symp-

toms. At one in the morning the paroxysms of excitement of the brain, which produced the convulsions, had ceased to recur, and the jaw had become locked. At eight A. M. pulse 160, strong and regular; heat of whole surface great; eyes half closed and lifeless. At eleven A. M. pulse 120, unequal and intermitting. The child lived till three o'clock in the afternoon. On opening the body a large quantity of thorn-apple was found in the ileum; some of it in pieces that admitted of being felt through the coats of the intestine, but the greater part in a state of minute division. A great deal of the poisonous substance was intimately blended with the fluid secretions in the intestiné, but as much of it as could be got away separately weighed nearly half an ounce. In the stomach only one particle of stramonium remained, and none in the duodenum or jejunum. The bladder was distended. Blood-vessels of the pia mater remarkably loaded, and more water than usual in the ventricles of the brain.

Dr Young, in his letter to you, observes, that "for all poisons which cannot be neutralized by some chemical antidotes, the administration of oil, in very large quantities, must be *the grand and general remedy.*" This opinion seems in opposition to the result of the experiments of Fourcroy and Renault; for these chemists ascertained, that animals to whom the white oxide of arsenic, mixed with *butter or fat*, was administered, died much sooner than those to whom this poison was given in combination with *any other* substance. In cases, too, of persons being poisoned with such a large quantity of opium, as in the case related by Dr Marcet in the Medico Chirurgical Transactions, and successfully treated by perseverance in the exhibition of active emetics, I cannot think that oil would be a sufficiently powerful remedy. The only case which Dr Young advances in support of his strong recommendation of oil, is one of poisoning by stramonium.—Castor oil was the principal remedy employed, and the patient (a boy about two or three years old) was not a day in recovering his usual health. So slight a case of poisoning as this appears to have been, is not, however, the best adapted to establish, in a satisfactory manner, the superior efficacy of a new mode of treatment. I say slight case of poisoning, because nearly two hours elapsed without any thing being done; yet the *narcotic* effect of stramonium did not take place. "A peculiar wildness of look, with general suffusion and *some* convulsion," were observed indeed, but *no* stupor—*no* insensibility. When a third part only of the supposed quantity of the noxious substance had been cast up, the persevering for three or four hours, without any decrease of the symptoms, in nothing more than a small dose of castor oil every ten minutes, implies the comparative mildness of the case. Dr Young does not mention the *size* of the apple of stramonium which the child took; but states, that a little more than a third part of it was discharged at one time, and the greater half in another, (that is, together, more than five-sixths); therefore the child, most probably, swallowed it piecemeal, (for it would have been more difficult if the thorn-apple had been much comminuted to have made an estimate of the quantity thrown up), and, if so, the sphere of action of the thorn-apple must have been very much contracted, whatever the size of it might be.

P. S. A good deal has been lately said about the identity of chicken-pox and the small-pox. Without pretending to argue the question, I may ask, Whether the cases of persons inoculated for chicken-pox, and, at the same time, for the small pox and cow-pox, as stated by Dr Willan, (p. 197 of his work), do not sufficiently establish the chicken-pox to be a disease *sui generis*?

Case of Cynanche Laryngea, with appearances on Dissection, by James Anders, Esq. Surgeon, Royal Nottinghamshire Militia.

Sir,—I beg leave to mention to you briefly the following apparently novel

case, on account of its similarity to those described by Dr Abercrombie in your Journal. It was witnessed by my friend Dr Travers about ten months since.

The patient was an infant eight months old, and was found with the most common symptoms of *cynanche laryngea*, a very loud croaking noise in breathing, remarkable distress of countenance, and a very quick small pulse. There was no room to hesitate in calling it a case of croup, except from the length of its duration. Antimonial emetics, calomel, warm baths, blisters, &c. were all carefully employed without lessening the violence of the disease, and the child died about the fourteenth day of the attack.

Upon dividing the integuments in dissection of the throat, a quantity of purulent matter gushed from under the knife to the amount of about half an ounce, and the sac of an abscess was found attached to the under surface of the muscles covering the thyroid cartilage, being reflected over that cartilage, and bounding nearly the extent of the os hyoides. The trachea and larynx themselves had no unusual vascularity, but contained a quantity of common mucus. The sacculi laryngis were filled with pus. This abscess, which had no doubt produced all the symptoms, was naturally and easily overlooked in the course of a customary examination of the child, but could its existence have been suspected and searched for, it might have been detected, and life, perhaps, saved by its being opened. And the case, in common with Dr Abercrombie's, strongly shews the necessity of a careful examination of the parts ABOUT the larynx, when signs of disease in that organ are met with, since we thus find that a cause may sometimes be discovered, requiring treatment so essentially different to what is usual.

Newark, 12th April, 1819.

Extract from a Letter from Robert Renton, Esq. Surgeon, Pennicuick, containing an Account of the confirmed Recovery of a Case of extirpated Fungus Hæmatodes of the Eye, and of the Sphacelated Intussusceptio.

Sir,—As it is a matter of much importance in the history of those cases of fungus hæmatodes, wherein operations have been performed, to know, how long the good effects that result from such operations, continue in arresting the progress of so formidable a disease; may I, therefore, request you to insert this letter, along with the case I gave you in November 1818, which contains, I am still happy to say, a favourable account of the patient's recovery, to this date I saw her yesterday. She has completely regained her health and strength, and has had no return of pain in the orbit or head. The parotid and submaxillary glands seem to be in their natural state, and uncontaminated by the disease, and no fungus has protruded from the orbit.

Permit me likewise to avail myself of the opportunity which this letter affords, to inform you of the result of the case of intus-susceptio, sent to you by my son Alexander, the history of which, I believe, is to be found in the October number of your Journal for 1817. Three years have now already elapsed since the patient voided by stool a portion of his ileum, measuring upwards of eighteen inches in length; and he has been able, during the greatest part of that period, notwithstanding the loss of so large a portion of intestine, to attend to his usual labour, and has suffered no impediment in the daily discharge of it, either from weakness or pain. A continual craving for food, (a circumstance which, I have no doubt, depended in a great measure upon the destruction of the mesenteric glands attached to the portion of intro-suscepted intestine,) was one of the symptoms that harassed him longest in the progress of his recovery. The digestive organs have, however, completely recovered their natural functions; and the lankness of body, under which he laboured, is entirely removed. The food he takes yields him a natural supply of

nourishment, and he can even indulge in the use of malt and spirituous liquors, without experiencing those returns of pain in the bowels with which he used formerly to be attacked.

Extract from a Letter from Dr Richard Pearson, on the Administration of Remedies in Hydrophobia.

REFLECTING on the powerful, and almost instantaneous effect, produced on the living body, by medicinal substances injected into the veins, I sometime since suggested in a London paper, under the signature of "Medicus," * the idea of resorting to that method of treatment in hydrophobia, when the spasms render the administration of remedies by the mouth and *per anum*, impracticable. No physician can hesitate to adopt this measure, under the circumstances mentioned. It is constantly practised upon diseased horses, at the Veterinary Institution at Copenhagen; and it is remarked by the author of a valuable work on physiology, that it might be advantageously employed in medical practice in some urgent and difficult cases, in which the ordinary means of relief prove unavailing. †

Admitting the justness of this remark, the only question is, what kind of medicinal substances should be employed in this way, in hydrophobia? I would propose narcotics and antipasmodics. Among the former, aqueous solutions of opium, or of the extractum hyoscyami, or of the extractum belladonnæ; among the latter, aqueous solution of subcarbonate of ammonia, of assafœtida, or aqueous infusion of ipecacuanha, &c. all of a blood-warm temperature. ‡

It will be necessary to proceed with caution, in regard to the quantity of any of the above mentioned substances injected into the veins. Suppose, at the first, that one half as much were to be employed, as is usually given by the mouth. After waiting some minutes to see the effect, the same dose, or a double dose may be repeated, according to circumstances. The quantity of warm water in which the medicines are dissolved, for this purpose, should perhaps not exceed two drachms.

The object proposed, in injecting into the veins narcotic and antispasmodic substances, in cases of hydrophobia, is to subdue the spasms which impede deglutition. The moment this object is attained, hydrophobia ceases to be an intractable disease. It is reduced to a level with other diseases; and opportunity is then given of administering remedies, both liquid and solid, in the usual way.

The syringe should terminate in a small bent silver tube. Blumenbach has given an engraving of an apparatus, adapted to this purpose, in the first volume of his Medicinische Bibliothek.

Dr R. P.'s medical friends are giving their attention to the proposed plan; and he himself may probably soon have an opportunity of putting it to the test, several persons having recently been bitten by a mad dog in this neighbourhood.

Sutton Coldfield, near Birmingham.

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* St James's Chronicle for August 14th.

† Un sage emploi de ce moyen pourrait être très utile en médecine, pour quelques cas extrêmes où les secours ordinaires sont insuffisans. Magendie, Physiologie, Tome II. p. 343.

‡ The syringe should be kept immersed in water, of the temperature of 96 or 98 till the moment it is used, it being of great consequence that whatever is thus introduced into the circulation, be of an equal warmth with the blood.

THE

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NOTICES TO CORRESPONDENTS.

Communications have been received from Drs Oudney, Edmonstone, Dickson, J. H. Walker, and Veitch; and from Messrs Scott, Hickman, Owen, Salter, G. N. Hill, and a Surgeon.

The following publications have been sent to us for review.

Indications which relate to the Laws of Organic Life. By Daniel Pring. 8vo. London, 1819.

Observations on Strictures of the Rectum. By W. White. Third Edition. Bath, 1820.

Practical Remarks on Yellow Fever. By G. Birnie. 8vo. Belfast, 1819.

A Report of the Practice of Midwifery, at the Westminster General Hospital, during 1818. By A. B. Granville. 8vo. London, 1819.

Further Observations on the Internal Use of the Hydro-Cyanic Acid. By A. B. Granville. London, 1819.

Medical Report of the Fever Hospital and House of Recovery, Cork Street, Dublin, for the year ending 4th January 1819. By Richard Grattan, M. D. &c. pp. 122. 8vo. Dublin, 1819.

A Treatise on Nervous Diseases. By John Cooke, M. D. in two volumes, Vol. I. on Apoplexy, including Apoplexia Hydrocephalica. 8vo. London, 1820. pp. 470.

A Letter to the Right Honourable F. P. Robinson, M. P., on the Plague and Contagion, with reference to the Quarantine Laws. By Augustus Bozzi Granville, M. D., &c. 8vo. London, 1819. pp 122.

Revue Medicale, Historique et Philosophique. Par MM. Bally, Bellanger, Berard, Bertieu, Bouquet, Delpech, Desportes, Double, Dunal, Esquirol, Gasc, Girardy, Jadioux, Laurent, Nicod, Prunelle, Rouzet. 1re Annee, 1re Livraison, 8vo. Paris, 1820. pp. 194.

Experimental Observations on the Operation of Lithotomy, with a Description of a Fascia of the Prostate Gland, which appears to explain anatomically the cause of animal infiltrations, and consequent death. By Granville Sharpe Pattison, Surgeon. 8vo. Philadelphia, 1820.

Medico-Chirurgical Transactions, published by the Medical and Chirurgical Society of London, Vol. X. Part II. 8vo. London, 1819. pp. 438.

Practical Observations on the means of preserving the Health of Soldiers in Camp and Quarters, with notes on the Medical Treatment of several of the most important Diseases which were found to prevail in the British Army during the late war. By Edward Thornhill Luscombe, M. D. 8vo. Edinburgh, 1820.

Report of the Carlisle Dispensary for the year 1819.

A Complete Treatise on the Natural Symptoms and Cure of Lues Venerea, Historical, Theoretical, Practical, and Original. A New Edition. By Jesse Foot, Esq. Surgeon. 8vo. London, 1820.

An Address to Persons afflicted with Deafness, particularly the obscure diseases denominated Nervous Deafness. By W. Wright. 12mo. London, 1820.

Died lately, Robert Stewart, M. D., first member of the Medical Board of Bombay, who had recently returned to this country from India, after an absence of 25 years. He was a man of superior talents, and had recently published in India an Account of the Cholera Morbus, which devastated the peninsula.

The long expected work of Mr Cross of Norwich, on the Variolous Epidemic of 1819, is in the press, and may be very shortly expected to appear.

THE

EDINBURGH

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1. APRIL 1820.

PART I.

ORIGINAL COMMUNICATIONS.

I.

RESEARCHES ON THE PATHOLOGY OF THE INTESTINAL CANAL.

By JOHN ABERCROMBIE, M.D. Fellow of the Royal College of Surgeons of Edinburgh.

PART II.

ON THE INFLAMMATORY AFFECTIONS.

BETWIXT a fatal case of ileus, and a fatal case of enteritis, there is usually a considerable similarity in the morbid appearances which are observed on dissection. In both we generally find a portion of intestine in a state of distention, and the distended part is more or less inflamed, with exudation of coagulable lymph, lividity, or gangrene. But when we trace more accurately the history of the two affections, we discover an important difference. We find reason to believe that ileus may be fatal in the state of distention without inflammation, and that enteritis may be fatal without distention; or, in other words, that the distention is the primary disease in the one, and in the other, the inflammation. In a former paper I have endeavoured to trace the pathology of ileus, and I have proposed various conjectures in regard to the nature and origin of the

disease. I conceive it is to be viewed as the disease of a muscular organ, originating in a part of that organ being distended beyond its power of contraction. A muscular organ thus distended passes into inflammation, as we observe in the urinary bladder. One of the sources of this distention I have supposed to be, such a debilitated state of the muscular fibres at a particular part of the canal, that they are distended before that impulse from the healthy parts above, which in their natural state would have excited them to contraction. Now, nothing, I imagine, is more likely thus to destroy the action of muscular fibre than inflammation. I do not mean to enter upon the question, whether this be a primary or a secondary effect of inflammation, but we have, in various parts of the body, ample evidence of the fact, that muscles which have been inflamed, are much impaired in their muscular action, and often completely paralyzed. If we suppose, then, a portion of the muscular coat of the intestinal canal to be thus weakened or paralyzed by inflammation, and that the healthy parts above are forcibly propelling fluid matters and flatus into this portion, we readily conceive how it is distended before this force, and the case then assumes the usual appearances of ileus. Enteritis, then, or primary inflammation of the intestinal canal, may be said to be one of the causes of ileus, or, in other words, to terminate in ileus; while, on the other hand, ileus originating in other causes, usually terminates by inflammation of the distended part; and thus the two cases, which differ widely at their commencement, are, at their termination, remarkably similar.

If these principles be correct, it will follow, that the symptoms and the morbid appearances of ileus will accompany enteritis only when the inflammation is seated in the muscular coat; and this leads us to a most important distinction in the inflammatory affections of the intestinal canal, both in regard to the seat of the inflammation, and the symptoms which accompany it. In regard to the former, we shall see reason to believe, that the inflammation may be primarily seated either in the peritonæal, the muscular, or the villous coat, giving rise to important diversities in the symptoms, and that it may spread from one structure into another, producing remarkable changes of the symptoms, at different periods of the same case. Thus, while the inflammation is confined to the peritonæal coat, it is probable that the disease may go on without interrupting the muscular action of the canal, or that the irritability of the muscular fibres may even be increased, so as to occasion diarrhœa. When the inflammation, again, is in the villous coat, the mus-

cular action may also be unimpeded, and may be still more likely to be increased; but when the inflammation in either case extends to the muscular coat, the symptoms pass into those of ileus.

These conjectures correspond with the phenomena which we observe in diseases of this class. We find inflammatory symptoms in the abdomen, connected with a natural and healthy state of the action of the intestinal canal; and we find them connected with diarrhœa. In both these conditions, the disease may be fatal without interruption of the intestinal action, and yet proofs of most extensive inflammation may be found on dissection; and, on the other hand, a case may begin with a natural state of the bowels, or with diarrhœa, and, at a more advanced period, may pass into ileus. In connection with these varieties in the symptoms, we find, in the fatal cases, diversities equally important in the morbid appearances. In many we find gangrene combined with deposition of coagulable lymph; but in some we find extensive gangrene without this deposition, while, in others, we observe such deposition in great quantity, without the slightest appearance of gangrene. Now, the deposition of coagulable lymph is probably to be considered as the result of inflammation of the peritonæal coat, while the muscular coat, I imagine, is to be viewed as the seat of gangrene. The two appearances, indeed, are very often combined, but, if this distinction be correct, it will furnish us with a criterion by which we may judge, in many cases, of the primary seat of the disease, and some singular facts occur as the result of this investigation. In those cases which are primarily inflammatory, that is, distinguished from the commencement by pain, tenderness, and fever, gangrene is not so frequent as we are apt to suppose; and it very rarely occurs uncombined with gelatinous deposition; while in those cases which begin as ileus, that is, with obstruction of the bowels, without fever or tenderness, gangrene will be found to be very common, and frequently to occur without gelatinous deposition. But, farther, it will be found, that, in several of the cases which terminated by exudation without gangrene, there was no obstruction of the bowels, or not till an advanced period of the disease, while the symptoms of ileus had existed from an early period in those cases in which there was extensive gangrene: and in case 9th, in which there were both extensive exudation and gangrene, the intestinal action was at first natural, and afterwards there occurred symptoms of ileus. These results are curious, and if they shall be verified by farther observation, they are important. They give considerable probability to the conjectures

which I have proposed in regard to the pathology of these affections,—that the inflammation may affect the whole structure of the canal, or may be confined to one of the coats;—that, when it affects the muscular coat, obstruction takes place, but that, when it is confined to the peritonæal coat, the muscular action of the canal may go on without interruption;—that the proper termination of the disease in the peritonæal coat is gelatinous exudation, in the muscular gangrene.

These principles I propose for farther investigation; and I shall at present only add a comparative view of the cases of ileus and of inflammation, which will be found in this and the preceding paper. Setting aside the cases which were connected with mechanical obstruction, I have described eight fatal cases, which were selected as exhibiting the symptoms of ileus without primary inflammation. Of these the terminations were the following:

Distention without inflammation in	1
Distention with inflammation, slight, and quite recent,	2
Gangrene without exudation,	2
Gangrene with slight exudation,	3

In this paper I shall describe eight fatal cases, which were selected as exhibiting primary symptoms of inflammation; and of these the terminations were,

Extensive exudation, without gangrene,	5
Exudation, accompanied with gangrene,	3

In none of the former was there exudation without gangrene, and in none of the latter was there gangrene without exudation. I exclude from this comparison the remarkable case, (case 11th,) because I conceive that in it the affection of the bowels was not the fatal disease. It is highly valuable, as shewing the state of the parts when a severe attack of this kind had been recently recovered from.

These cases were originally arranged, according to their symptoms, under the two heads of ileus and inflammation, without any attention to the mode of their termination; and it was only after the first series was printed that this peculiarity in their terminations occurred to me; for, in arranging the cases of this second part, and searching for a case of primary inflammation which was fatal by gangrene without exudation, I found that I had no such example. The subject is worthy of careful investigation. It is a remarkable fact, that in all the inflammatory cases there was exudation of considerable extent; that in more than half of them it was the only morbid appearance, and

a prominent appearance in all; that of the cases of ileus, again, three were fatal without either exudation or gangrene; that gangrene occurred in all the remaining cases as the prominent appearance, and the only appearance in two out of five. The following conclusions from these facts I state at present merely as conjectures.

1. In all the cases which exhibited symptoms of primary inflammation, the peritonæum seemed to have been extensively affected; and in various parts of the body we see reason to believe, that the symptoms accompanying inflammation of membranous parts are more acute than in any other structure. Is it, then, probable that, in the acute affections of the bowels, the inflammation is primarily seated in the peritonæal coat?

2. In several of the cases of ileus which were fatal by extensive gangrene, there had been no primary symptoms of inflammation, and in some of them not till a very short period before death. Is it, then, probable, that inflammation may exist in the muscular fibres without producing acute symptoms, and distinguished only by symptoms of ileus, and that, in these cases, the symptoms of acute inflammation supervene when the inflammation extends to the peritonæal coat? Were this rendered probable, it would add considerably to our pathology of ileus, and would throw much light on the action of several remedies which are found efficacious in producing very sudden resolution of the disease, such as large bleeding and the application of cold. It would, however, still be probable that there are cases of ileus which proceed from other causes, and require a different treatment. The subject is most important. Much observation is required to throw light upon it.

3. I shall afterwards give my reasons for believing that inflammation may exist in the peritonæal coat without producing very violent symptoms. If, therefore, each of the two structures may be separately affected, and with this diversity of symptoms, it will be probable that it is when the inflammation affects both the peritonæal and muscular coats at once, that we find the combination of inflammation and ileus, which we express by the term Enteritis. It is in this sense that I mean to use the term Enteritis in the following part of this paper.

Symptoms of Inflammation in the Intestinal Canal.

Sect. I.—*Inflammation confined to the Peritonæal Coat.*

The title which I have placed at the top of this section, I merely propose as expressing the opinion which I have been

led to form in regard to the nature of the insidious and dangerous disease which I mean to describe. It differs so remarkably from the disease which is usually described under the name of Enteritis, as fully to merit a distinct investigation.

The disease begins with pain in some part of the abdomen, varying very much in its seat, its degree, and its general characters. It is sometimes nearly general over the abdomen, and sometimes confined to a particular part, as one side of the abdomen, or very frequently to the lower part, immediately above the pubis. It is increased by pressure, and, in some cases, it is little complained of, except when pressure is applied, being rather acute tenderness than actual pain. In other cases there is acute pain, which comes on in paroxysms, very violent while it continues, so as probably to occasion screaming, but going off completely after a short time, leaving only the tenderness on pressure, which is sometimes in such a degree that the weight of the bed-clothes gives uneasiness. Yet, notwithstanding this tenderness, the patient may be, during considerable intervals, free from any acute pain when he lies perfectly still, but it is excited by various exertions, as coughing, sneezing, a full inspiration, and by any motion of the body.

According to the seat of the disease, various neighbouring organs are affected. When it is in the lower part of the abdomen, it is generally accompanied by frequent painful desire to pass urine, and an acute pain extending along the urethra. Sometimes the secretion of urine is greatly diminished, or nearly suspended. There may be along with this such frequent desire to pass it as leads to the suspicion of retention, but the catheter being employed in such cases, the bladder is found empty. When the disease is in the upper part of the abdomen, there is frequently vomiting, and sometimes a peculiar convulsive eructation or belching of wind, which continues without intermission for a considerable time. But vomiting is not a regular symptom, and seems only to occur when the disease is in the upper part of the canal. Sometimes we observe hiccup and quick short breathing, probably connected with an affection of the diaphragm. The pain sometimes suddenly shifts its place, as from the region of the stomach to that of the bladder, or from one side of the abdomen to the other. In some of these cases it leaves its former seat, in others, both continue to be affected at once.

The pulse is frequently little affected, especially in the early stages. It may be from 80 to 90, or 96, but is sometimes scarcely above the natural standard. The state of the bowels varies considerably; but a leading peculiarity of the disease is,

that they are not obstructed. Sometimes there are frequent calls to stool, with scanty slimy discharges, sometimes a more copious diarrhœa, with much pain and straining, but very often, perhaps most commonly, the bowels are in a natural state, being readily moved by very mild medicines. These evacuations, however, produce no relief; on the contrary, the patient generally complains of violent pain during the operation of the mildest purgative, and after the operation is over, all the symptoms are found to be increased.

Such are the general characters of this affection. It differs from enteritis in the bowels being natural or loose; the pulse being little affected; the pain often occurring in paroxysms, so as to be mistaken for a spasmodic or flatulent affection; and in the absence of vomiting, except in certain cases formerly referred to. These peculiarities are chiefly observed in the early stages; as the disease advances they usually become less remarkable; the pulse rises, the pain becomes more fixed and permanent, the belly becomes tympanitic, and, at a certain period, obstruction takes place, and the case passes into all the usual symptoms of enteritis. It may, however, be fatal without this change; the bowels continuing regular, and the pulse from 80 to 90, until a very short time before death.

The disease, as will be seen from the cases, may be fatal in three days. On dissection we find uniformly effusion of coagulable lymph; in some cases very extensive, and frequently effusion of a turbid or puriform fluid, sometimes in considerable quantity. Gangrene is rare; and, as far as my observation extends, never occurs as the prominent appearance; it being, when it does occur, slight and partial, and always accompanied by extensive deposition of coagulable lymph. I have stated my conjectures in regard to the nature of this disease. I conceive it to be inflammation, confined to the peritoneal coat, and that, in consequence of this, the muscular action of the canal is not impeded. It may continue a considerable time, and perhaps be fatal in this state, or it may spread to the muscular coat, and give rise to the usual symptoms of enteritis.

Inflammation of the peritonæum may occur in a more limited form than in the disease which I have now described, and, according to the seat of it, may assume the appearance of disease of various organs, as the bladder, the kidney, the liver, or, when seated in the membrane covering the diaphragm, may simulate disease of the lungs. I think I have seen it in one case seated in the ligaments of the liver, and giving rise to very obscure and anomalous symptoms. When it occurs in the neighbourhood of the kidney, I think it may induce the proper

Ischuria Renalis, which is usually fatal by coma and effusion in the brain. I do not know whether inflammation may be seated in the peritonæum lining the parietes of the abdomen, without affecting the intestinal canal. I have seen some cases which I supposed to be of this nature, but I have not ascertained it. The cases to which I refer terminated favourably.

Sect. II.—*Inflammation confined to the Muscular Coat.*

There is much obscurity in the pathology of muscle, particularly in regard to the effect of inflammation on muscular fibre. Perhaps we have been too much in the habit of passing over the investigation by an indiscriminate application of the term Rheumatism. We cannot doubt that muscular fibre is liable to gangrene, but rheumatism never terminates in gangrene. It is probable, then, that muscular fibre is liable to an inflammation differing materially from rheumatism. The most remarkable example of it in the extremities is in the high inflammation which follows compound fractures, and which often terminates in extensive gangrene. We see it also in the psoæ muscles, where it generally terminates by suppuration; sometimes of such extent that every trace of muscular fibre has been lost, nothing being left but the sheath, full of purulent matter.* Though the subject be extremely obscure, I think we are warranted in supposing that the muscular fibres of the intestinal canal may be the seat of inflammation, and that it may terminate in gangrene. I have already mentioned the circumstances which induce me to conjecture that inflammation in the intestine may be confined to the muscular coat, that it sometimes exists there producing ileus, but not accompanied by symptoms of active inflammation. Did this take place in the remarkable case, (Case 3d of my former paper,) in which there was extensive gangrene, though there had been no symptom of active inflammation till a few hours before death? It is mere conjecture, but it is a point highly deserving of minute investigation.

Sect. III.—*Inflammation affecting the Muscular and Peritonæal Coats at once.*

I think we may consider it as fully ascertained, that extensive inflammation may exist in the intestine without producing ob-

* See Thomson's Lectures on Inflammation.

struction or symptoms of ileus; and it is highly probable, that, in such cases, the inflammation is confined to the peritonæal coat. On the other hand, we have seen that ileus may exist without inflammatory symptoms, while an inflammatory action seemed really to have been going on, which was probably seated in the muscular coat. When both these structures are affected at once, I think there is produced the genuine enteritis, which may be designated as a combination of the symptoms of active inflammation, with symptoms of ileus;—tenderness of the abdomen and fever, with obstruction of the bowels and vomiting. If these principles are correct, it will follow, that enteritis may appear under three forms, and this division seems really to correspond with the phenomena which meet us in the history of these affections. (1.) The disease may begin in the muscular coat, (whether originally inflammatory, or consisting of loss of action from other causes,) and may at an advanced period affect the peritonæal coat. In this case the symptoms will be first those of ileus, afterwards passing into those of active inflammation. (2.) The disease may begin in the peritonæal coat, and afterwards extend to the muscular, in which case there will be the symptoms of peritonæal inflammation passing into enteritis. This form of the disease is exemplified in Case 9th, and the appearances are such as we should expect upon the principles which I have proposed; extensive exudation of coagulable lymph combined with gangrene; and in Case 10th, in which there was the same course of symptoms, but fatal without gangrene. (3.) Both structures affected at once producing the genuine enteritis.

Sect. IV.—*Inflammation of the Villous Coat.*

This subject presents a most important field of investigation, in which hitherto little has been done. The appearances are generally, a considerable portion of the inner surface of the intestine covered with irregular patches of inflammation. These are of various extent, and are often sensibly elevated above the level of the surrounding parts. Sometimes they present on their surface numerous small vesicles, and at a more advanced period these seem to pass into minute ulcers. The symptoms appear to vary according to the seat of the disease: when it is in the lower part of the canal they seem to be nearly allied to dysentery. When it is in the small intestine there is generally a peculiar painful diarrhœa, in which watery matters pass through in large quantity, with much pain and straining, any thing taken into the stomach exciting an irritation which

continues till it be thrown off. There is generally fever and thirst, and sometimes vomiting. It appears to be a common and fatal disease of infants, not easily distinguished in its early stages from their common bowel complaints,—very untractable, and frequently terminating by coma. In adults the disease occurs both in an acute and chronic form. The latter I suspect is not uncommon. I shall afterwards describe several examples of it, both in the state of simple inflammation and ulceration. The former, I believe, is more uncommon in adults as an idiopathic disease, but it seems to occur as a symptomatic affection in cases of malignant typhus. I mean afterwards to attempt an outline of this important subject, and only refer to it here in this superficial manner, in connection with the subject of this paper, to introduce the remarkable case (Case 18th) in which this affection seemed to pass into enteritis.

Examples of the Leading Varieties of Inflammation of the Intestinal Canal.

I.—Extensive Peritonitis with Diarrhœa.

Case I.—A woman, 30, a servant, unmarried, after being feverish for a day or two, was seized, on 8th December 1817, with diarrhœa, accompanied by considerable pain. On the 9th the diarrhœa continued; the pain was severe, and was increased by pressure. Pulse 90. Took some purgative medicine, which was vomited, and at night was bled to ℥xii. I saw her for the first time on the 10th, when I found her sinking. Pulse very frequent, and feeble; features contracted; a good deal of pain; some vomiting; belly tympanitic. Died at night. *Dissection.*—There were most extensive marks of peritoneal inflammation; nearly the whole surface of the intestinal canal being covered by a coating of coagulable lymph, which extended also over the convex surface of the liver, and over the whole surface of the spleen. It was in greatest quantity about the right side of the colon.

To this very important case I consider the two following as analogous.

Case II.—A girl, aged 16, had been for a week or two observed to be considerably fallen off in her appearance, and was affected with diarrhœa, which was frequent and severe, and had resisted various remedies. (4th September 1819.)—The diarrhœa continued, with considerable pain, which was most severe round the umbilicus. The

abdomen was tense and painful on pressure; the tongue was clean; the pulse rather frequent; but the appetite was unimpaired, and the girl was going about her usual employments. She took some opiates, and a blister was applied to the abdomen. (5th.)—Little change. (6th.)—Pain more severe; twisting round the umbilicus, and much increased by pressure. Diarrhœa increased; evacuations watery, copious, and rather dark-coloured; pulse 120, and small; abdomen tense, and a little tumid. Was bled to ℥xv. (7th.)—Symptoms much relieved. Blood buffy and cupped. From this time she continued to improve till the 14th, when the pain suddenly returned with great severity, increased by pressure, and accompanied by dysuria. Bowels open; pulse 112, and small. Was bled to ℥xv. (15th.)—Pulse 100; pain in the region of the bladder, extending along the urethra, with dysuria; bowels moved repeatedly and copiously; evacuations pretty natural; abdomen still tender. Was bled to ℥xii., and blistered. Blood buffy and cupped. (16th.)—Symptoms relieved; took an opiate. Pulse being still frequent, began to take digitalis, and in a few days was free from complaint.

Case III.—A lady, aged about 40, complained of frequent diarrhœa, accompanied by violent pain over the whole abdomen, especially the lower part. The pain was aggravated before the evacuations took place, but it was never gone, and it was sometimes aggravated without evacuation; it was increased by pressure. Pulse about 108; tongue dry, with thirst; no vomiting. Evacuations extremely frequent, copious, and varying in appearance, being sometimes dark, watery, and offensive, sometimes whitish. I have no notes of the particular details of this case. It was treated by blood-letting, which was repeated three times; the pulse then came down, and the pain and tenderness of the abdomen were removed, after which the natural state of the bowels was restored by the usual means.

II.—Peritonitis with a Natural State of the Bowels.

Case IV.—A girl, aged 15. On Sunday, 2d March 1817, was at church in her usual health; in the evening complained of some pain of the abdomen. (3d.)—Had pain of the belly and some vomiting; took castor oil, which operated copiously. (4th.)—Pain continued, with some vomiting, but not urgent, and the complaint excited no alarm. Bowels open. Was seen by a medical man, who found her pulse 116, and very small, and the belly painful on pressure. (5th.)—Belly tense and tympanitic; symptoms not relieved. Was bled without benefit. Sunk rapidly, and died at night. I did not see this case during the life of the patient. I was present at the examination of the body. *Dissection.*—On opening the abdomen the whole of the small intestines presented one smooth uniform surface, being firmly glued together, and the interstices filled up by an immense deposition

of coagulable lymph, which was quite soft and recent; the mass also adhered to the parietes of the abdomen. There was a similar deposition, though in smaller quantity, on the surface of the great intestine, and was traced nearly to the extremity of the rectum; it also appeared on the surface of the liver. The omentum was inflamed and dark-coloured, and there were considerable marks of inflammation on the peritonæum lining the parietes of the abdomen.

Case V.—A girl, aged 15. (12th May 181 .)—Had fever, with pneumonic symptoms; was bled with relief; the fever subsided gradually, and on the 19th she was considered as well. On the 20th, at night, she complained of some pain of the belly, which soon went off, and through the night she felt no uneasiness. (21st.)—Had violent pain, with vomiting; pulse frequent; pain increased by pressure. Took some laudanum, and afterwards purgative medicine. The vomiting subsided after the laudanum; the pain was much alleviated, and was only complained of on pressure. The purgative medicine did not operate during the day, but operated in the night four or five times. I saw her for the first time on the morning of the 22d, and found her moribund. Pulse not to be counted from its weakness; features collapsed; belly tympanitic. Died in less than an hour after the visit. *Dissection.*—The bowels in several places, especially on the ileum, were inflamed with effusion of coagulable lymph. At the lower end of the ileum, about an inch from the caput coli, there was an inflamed portion, in the centre of which there was a white spot the size of a shilling, and in the centre of this spot a round aperture, which admitted a small quill; the edges of it were rounded and a little thickened. Much fluid feces and gas had escaped into the cavity of the peritonæum, and the bowels were not distended. There were in some places a few livid spots, but no gangrene.

Case VI.—A man, aged 50, had acute pain of the hypogastric region, with dysuria. After the operation of a dose of castor oil, on the following day the pain was so much increased, as to produce writhing of the body: urgent ineffectual efforts to pass urine; pulse natural. Relief was obtained from the warm bath, after which urine was voided. 3d day, Pain and dysuria continued; pulse nearly natural; bladder found empty by the catheter. (4th,) Copious evacuations by stool; some high-coloured urine passed; pulse 90 and soft; tongue white. (5th.) Pain returned after a saline purgative, which operated scantily; it was chiefly referred to the left iliac region; increased by pressure; restlessness; much flatus from the stomach; some vomiting on taking anything; pulse 96, in the evening 84. (6th.) The pain had shifted to the right iliac region; pulse 124, small and weak; features collapsed; body cold; died at 4 P.M. *Dissection.*—Much exudation and adhesion over the whole surface of the bowels. The ileum, cæcum, and colon, were injected with

numerous blood-vessels, in some places so as to acquire a dark colour, but the texture remained entire and firm. The appendiculæ pinquedinosæ were injected and covered with a viscid effusion, communicating the appearance of a mass of disease. The external and posterior portion of the bladder appeared also a little injected; other viscera natural.*

Case VII.—A woman, aged 45, (26th October 1816,) had frequent vomiting, and pain across the epigastrium, which was increased by pressure, by motion, and by a full inspiration; pulse 84; tongue white; bowels had been moved in the morning. Was bled to ℥xii. and took laxative medicine.

27th. Vomiting subsided; pain not relieved, but extended farther down over the abdomen; much increased by pressure; pulse 84. Was bled again, but only ℥vi. obtained; took castor oil.

Vespere.—Bowels moved fully five or six times; evacuations at first scybalous, afterwards thin and feculent. Severe pain, occurring in paroxysms; great tenderness over the whole abdomen; tongue white; pain excited by a full inspiration, and by motion; pulse 84, of good strength. Was bled to ℥xx.

28th. All the symptoms relieved; bowels open; was well in a few days.

Case VIII.—A gentleman, aged 25, (18th September 1816,) was affected with pain in the bowels, and frequent desire to go to stool, with scanty slimy discharges; pulse natural; took castor oil, which produced several stools, thin, feculent, and pretty copious; pain of the belly continued, not constant, but occurring in paroxysms, and aggravated by motion; belly painful when pressed; pulse then 80; considerable dysuria. Was bled to ℥xvj. and took a moderate opiate.

19th. Easy in the night, but in the morning the pain returned with such violence as to occasion screaming and extreme distress; it was chiefly about the umbilicus, but sometimes shifted to the stomach; violent pain in the region of the bladder, and extending along the whole course of the urethra; much dysuria; some vomiting; belly very tender; pulse from 90 to 100; several feculent consistent stools after a mild enema. Was bled to ℥xvj.; took gr. x. of aloes. After the bleeding, the violent pain subsided; the tenderness continued; repeated vomiting; and occasional short paroxysms of pain; dysuria continued, and at one time amounted to retention, which was relieved by a mild enema; bowels open; took an opiate at night.

20th. Much depression; sickness and faintness; belly tender and a little tympanitic; lay on his back, but could not bear the pressure of the bed-clothes; dysuria abated; no constant pain, but occasional

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* This important case is by Dr Marshall Hall. For the more particular details of it, see Vol. XII. of this Journal, p. 426.

paroxysms of short duration; respiration short and quick; countenance anxious; voice feeble; pulse 100; tongue foul; some vomiting; on taking a full breath, felt severely pained and cramped across the epigastrium. Was bled to ℥xii.; took some aloes, and at night gr. vi. of calomel.

Was much relieved after the bleeding; belly bore pressure; breathed more freely, and spoke more vigorously; pulse 100; tympanitic feel gone; discharged much flatus, and bowels were moved once.

21st. In the early part of the night was restless, with delirium and frequent vomiting. In the morning his bowels were moved four or five times, with much relief; pulse 80; all the symptoms abated. From this time continued well; discharged much hardened feces for several days.

In this important case, I believe the bleeding ought to have been repeated on the evening of the 19th, and the opiate seemed to be rather injurious.

III.—Peritonitis passing into Enteritis.

Case IX.—A gentleman, aged 20, (3d September 1812,) was affected with pain in the lower part of the belly, increased by pressure; bowels regular; pulse from 84 to 90; complaint began on the 2d; was bled freely, and took laxative medicine, which operated fully.

4th. Pain much relieved, but not gone; pulse 90; bleeding was repeated, and a blister applied.

5th. 6th. Pulse natural; complained only of occasional griping pain; took laxative medicines, which operated; the stools were green and watery, but copious.

7th. Free from complaint in the morning; bowels open; but the stools were still green and watery. In the afternoon complained that some laxative medicine produced most unusual pain; and at night had fixed pain in the upper part of the belly, with shivering, followed by heat; pulse 84. Through the night had copious feculent evacuations, without relief of the pain; vomited repeatedly.

8th. Pulse 96; fixed pain in the upper part of the belly; the whole abdomen was hard and painful on pressure, and a little tympanitic; repeated vomiting. From this period the bowels became obstructed, and the case resisted every active remedy; repeated blood-letting; blistering; cold applications; purgative injections; tobacco injections; various purgatives, &c.

9th. Pulse 100; pain unabated, but bore pressure better; belly tympanitic; vomiting abated; no stool, except some very scanty discharges of watery matter. At night, the pulse rose to 126; features contracted; belly swelled and tympanitic; hiccup; pain much abated. In the night the bowels were moved. Sunk gradually, and died at 9 o'clock on the morning of the 10th. *Dissection.*—All the intestines much distended, and glued together at every part by most extensive deposition of coagulable lymph; omentum highly inflamed,

and adhering to the intestines. At the lower end of the small intestine an extensive portion was gangrenous, and another at the lower part of the colon before it forms the sigmoid flexure. At this place the posterior part of the intestine, and a portion of the mesentery, were considerably thickened. The appendix vermiformis was gangrenous, and an opening had taken place in it, through which liquid feces had escaped into the cavity of the abdomen.

Case X.—A gentleman, aged about 20, (10th December 1817, late at night,) was found writhing and screaming, from violent pain in the abdomen, every part of which was tender to the touch; great pain and difficulty in making water; frequent vomiting; pulse 96, soft and rather weak; had felt pain for several days, but it increased on the evening of the 9th, with vomiting; took laxative mediome in the morning of the 10th, which operated freely three or four times, but since these evacuations the pain was much increased. Was largely bled, and took a moderate opiate.

11th. Much relieved; no vomiting; pain much abated; pulse 90, and of good strength. Bleeding was repeated; a mild enema.

In the course of the day, had some violent paroxysms of pain, and vomited twice; belly bore pressure better, except at one spot at the lower part of the right side, where it was acutely tender; urine passed more easily; pulse at night, 96: bowels moved: evacuation thin and feculent. Bleeding was repeated at night; cold applications to the abdomen; blister; mild enema.

12th. Pulse 90; no stool; less pain, but much tenderness of abdomen; very little vomiting; no tumefaction of abdomen. Two small bleedings, no more being borne; large blister; various laxatives.

13th. Pulse increasing in frequency, and becoming feeble; abdomen enlarged at the lower part, as if the bladder were distended, but by the catheter it was found to be empty; abdomen still tender; no stool; urine very scanty, and passed with much pain. Tobacco injections and various purgatives were employed.

14th. Pulse 120; no stool; no urine; belly tympanitic; lay through the day in a state of great exhaustion, with much vomiting, and died at night.

Dissection.—Extensive inflammation of the ileum, the inflamed parts extensively glued together, and pressed down into the pelvis by the distention of the parts above, which were inflamed also, but with less exudation; no gangrene; bladder inflamed and collapsed; omentum inflamed; about 1 lb. of puriform fluid in the cavity of the peritoneum.

IV.—Enteritis.

Case XI.—A young lady, aged 18, (4th March 1813,) complained of pain in the lower part of the belly, increased by pressure. Pulse 126. Some vomiting.

Was bled largely, and took laxative medicine; soon after had one stool; but, the pain and fever continuing, the bleeding was repeated at night, and the other usual remedies ordered.

5th. No relief; no stool. Pulse 120. Various laxatives, cold applications, tobacco injections, &c. were used without benefit, except that the cold applications to the abdomen (iced water) produced great alleviation of the pain.

6th. No stool; much pain; great paleness and sinking. Pulse 120. Various purgatives and injections were persevered in.

7th. Began to discharge after the injections some green slimy matter. Pain as before; pulse 120; countenance depressed and pale.

From this time the pain began to subside, and the pulse to come down gradually. On the 11th it fell to the natural standard. By persevering in the use of laxative medicines and injections at short intervals, the bowels began to yield, and on the 12th were fully moved four or five times.

From the commencement of her illness she had been affected with a pain in the left ear, and about the seventh began to complain of violent headach. This increased gradually; and on the 22d she died of an affection of the brain, which I have formerly described, (Obs. on Chronic Inflam. of Brain, case 11th.) From the 12th to the 22d, the bowels continued to discharge their functions in the healthy manner. *Dissection.*—The caput coli, and about eighteen inches of the lower end of the ileum, were of a dark livid colour, but not altered in their structure. Intestines in other respects were healthy.

Case XII.—A child aged 3 years and 3 months. (12th February 1812.)—Was affected with urgent vomiting and great thirst, all the liquid taken in being vomited almost immediately, mixed with large quantities of light green fluid. Pulse very frequent. Countenance sunk and anxious. Complained of no pain. She had been unwell for four or five days, but slightly. Took laxative medicine on the 9th, which operated freely. On the 10th seemed much better, and the bowels were quite open. Complained once of pain in her bowels, but had not mentioned it again. Vomiting began late on the evening of the 10th, and was very urgent through the whole of the 11th. Bowels had not been moved since the vomiting began.

The usual remedies were employed without benefit. The vomiting continued urgent, and the bowels obstinately obstructed. 13th.—Vomiting abated; medicines retained, but no effect from them. She continued through the day at times restless and feverish, at others oppressed and exhausted. Died in the night.

Dissection.—Stomach externally healthy; internally slightly inflamed, and containing much dark-coloured fluid. About a fourth part of the small intestine, at the upper part, was lightly inflamed; in many places black and gangrenous; in others, adhering from effusion of coagulable lymph. The diseased portion was greatly distend-

ed, and contained much dark-coloured fluid, but no feces. Immediately below this part the intestine became at once completely contracted, empty, and of a white colour, except a few streaks of superficial redness.

V.—Inflammation of the Villous Coat passing into Enteritis.

Case XIII.—A woman, aged 38, had been for more than a week affected with fever, want of appetite, and frequent diarrhœa, with much pain, when, on 13th June 1819, she was suddenly seized with most violent pain of the abdomen, especially about the lower part; but it afterwards extended over the whole abdomen. On the 20th the pain continued most violent, and was increased by pressure and by inspiration. Pulse 130; urgent vomiting. An attempt was made to bleed her, but very little was obtained, and soon after the pulse sunk, with coldness of the body; some discharge from the bowels. (21st.)—I saw her for the first time. Pain still severe; urgent vomiting, and hiccup; bowels obstructed; pulse 140. Died in the afternoon. *Dissection.*—Extensive inflammation on the outer surface of the small intestine, especially at the lower part, where there was considerable exudation and gangrene. Extensive inflammation of the inner surface in various places; and the inflamed portions were covered with minute ulcers or erosions. At one place, at the lower part of the ileum, there was a more extensive destruction of the villous coat, about the size of a shilling; this portion was surrounded by a ring of inflammation, with numerous small ulcers, and in the centre of it there was a small opening which perforated the intestine; the outer surface at this place was of a dark livid colour.

The high importance of the subject must be my apology for detailing so many examples, calculated, I trust, to illustrate the pathology of this most insidious and dangerous disease. They seem to warrant various pathological conjectures and important practical conclusions, both of which I must propose very briefly.

I.—*Pathological Conjectures.*

(1.) It is probable that intestinal inflammation may be primarily seated either in the peritonæal, the muscular, or the villous coat,—that it may be for a considerable time confined to one of them; and may afterwards pass from one to another, or may affect all the three.

(2.) It is probable that the terminations of inflammation are, in the peritonæal coat gelatinous exudation and serous effusion;

in the villous, erosion or ulceration, sometimes with exudation; in the muscular, gangrene.

(3.) It is probable that, when the inflammation is confined to the villous coat, the action of the canal is increased,—when to the peritonæal coat, that it may be increased, or may be natural,—that, when it affects the muscular coat, the action is impeded so as to produce obstruction or ileus.

II.—*Practical Conclusions.*

(1.) Extensive and highly dangerous inflammation may exist in the intestinal canal without obstruction,—may exist and go on to a fatal termination while the bowels are spontaneously loose, or are easily moved by mild medicines.

(2.) No diagnosis can be founded in such cases on the appearance of the evacuations; they are sometimes slimy and in small quantity; sometimes copious, watery, and dark coloured; and sometimes quite natural.

(3.) Extensive and highly dangerous inflammation may be going on with every variety in the pulse. It may be frequent and small, it may be frequent and full, or it may be little above the natural standard through the whole course of the disease.

(4.) Extensive inflammation may go on without vomiting and without constant pain, the pain often occurring in paroxysms and leaving long intervals of ease.

(5.) The peculiar tenderness which marks inflammation is the principal guide of the practical physician. Whenever this occurs, whatever may be the state of the pulse, and whatever the condition of the bowels, a disease is going on which will require his most eager attention, and his most active remedies.

Outline of the Treatment of Intestinal Inflammation.

In the treatment of this affection it is of essential importance that our attention be steadily and precisely directed to the real disease with which we are contending, and be not distracted by circumstances which may be considered as occasional effects of it. The disease is inflammation; and to subdue that is our great, our leading object in the treatment. An effect or concomitant by which our attention is apt to be distracted in many cases, is obstruction of the bowels. Now, this obstruction is not the disease,—it is only an effect of it, and an effect which, even

in the severest cases, is often wanting. This we have seen in various examples. We have seen the bowels obstructed,—we have seen them natural,—and we have seen them spontaneously loose; and under these various circumstances we have found the disease going on with equal certainty, and equal rapidity, to a fatal termination. We have seen no reason to suppose that the retention of feculent matter was injurious in the one case, or that the copious evacuation of it was productive of the slightest benefit in the other. On the contrary, there are facts which must lead to a suspicion that the action of purgative medicine upon the intestinal canal, when it is in a state of inflammation, rather tends to increase than diminish the disease. I do not assert that this principle is applicable to every case without discrimination. There may be examples in which acrid and irritating contents are acting injuriously, and there may be cases which supervene upon ileus, to which perhaps other principles must be applied. But I think it must be admitted that, in the ordinary cases of enteritis, the obstruction of the bowels is the immediate result of the inflammation;—that it is to be removed by subduing the inflammation, and by this only,—and that, could it be removed by any other means, it would in no respect improve the situation of the patient, as the original and highly dangerous disease would remain unchanged. On this important and delicate point I would not speak with unbecoming confidence; but I do submit, whether the whole phenomena of abdominal inflammation do not lead to the impression, that the use of purgatives is no part of the treatment in the active stage of the disease, and whether they are not likely to be injurious rather than beneficial. Even in the cases in which there is no obstruction, but in which mild purgatives operate readily, the patient generally complains of aggravation of the symptoms after their operation. How much more likely is this to occur in cases of proper enteritis, in which active purgatives are often given in repeated doses without avail? If benefit in these cases be expected from evacuation of the bowels, that benefit is not obtained, while there can be little doubt that an additional cause of irritation is thrown into the diseased parts; and why is this object thus defeated? because there exists in the intestine itself a disease which prevents its action, and which prevents purgatives from producing their usual effects. It would no doubt be desirable, in many of these cases, that the canal were freed from the presence of feces; but the question is, whether the injury from their presence can be compared with that which must arise from violent and ineffectual efforts to expel them,—from violent and ineffectual excitement of parts which

are already in a state of active inflammation. I have formerly referred to a fact which is also of essential importance in this inquiry; that, when purgatives do operate in cases of this kind, they generally bring off nothing but watery matters; and that it is only after the disease is subdued, and the bowels have recovered their healthy action, that solid feces are thrown off, which, we have every reason to believe, had been lodging from the commencement of the disease. There are, then, two views of this important subject which I submit for investigation and inquiry. (1.) That in the cases which I have considered as peritonitis, in which purgatives operate fully, we have no reason to consider their operation as beneficial during the active stage of the disease. (2.) That in the cases of proper enteritis their operation is defeated by the very disease with which we are contending.

In the treatment of enteritis, indeed, it is of essential importance that the intestines should be kept free from distention; but it is a point deserving most attentive inquiry whether this may not in general be done by means which are both safer and more effectual than the use of purgatives; particularly whether there be not, in the ordinary cases of enteritis, an action in the healthy part of the canal itself, which would answer every purpose that can be desired, did there not exist some great obstacle to its action, and whether our object ought not to be to remove this obstacle rather than to increase the action itself. The obstacle arises from the deranged action of the inflamed parts, and the chief means by which it is to be removed are those by which we subdue the inflammation; but there is a powerful auxiliary, which I think is calculated to answer the purpose for which purgatives are given, and that is the tobacco injection. I have formerly alluded to the precautions with which this very powerful remedy ought to be administered; the great advantage attending the use of it in enteritis is, that, while it tends to move the bowels and keep them free from distention, it is, at the same time, powerfully calculated to allay vascular action, and may thus assist in keeping down the inflammation.

These principles I submit for farther investigation. Several facts which I have related certainly give considerable reason to believe, that, when the intestinal canal is in a state of active inflammation, the tendency of purgatives is rather to increase than diminish the disease; and I think I am warranted in proposing this rule,—that they are not to be considered as a part of the treatment of enteritis, but rather to be avoided, if it be possible; that is to say, except there exist some strong and decided reason for having recourse to them. What the cases are

in which such reasons exist must be left to the judgment of the practitioner; perhaps in those which have supervened upon long continued costiveness or ileus, and when there is such a distention of the bowels with flatus or other matters, as must be highly injurious. In such cases, if we fail in obtaining the desired effect from the tobacco injection, or mild laxative injections, mild purgatives may be necessary, after the first activity of the inflammation has been subdued. But in how many instances are these causes wanting?—Do we not often see enteritis supervene upon the powerful operation of a drastic purgative, especially on exposure to cold after such operation? And in how many cases do purgative medicines which have been taken on the first appearance of the symptoms operate fully? To push the use of purgatives in such cases would be manifestly unnecessary, and probably injurious. The disease which we have, then, to contend with, is simply inflammation, and it must be combated in the most active manner by the appropriate remedies. These are few and simple; the most important is bloodletting, repeated according to the urgency of the symptoms and the strength of the patient. Of local remedies, large topical bleeding and blistering are often extremely beneficial. In a considerable number of cases I have used with evident advantage the application of cold, by covering the abdomen with cloths wet in cold water or iced water, or by pounded ice in a large bladder. Of iced water given by injection I have had little experience, but I believe it to be a remedy deserving of attention. The inflammation being subdued, the bowels are then to be moved by gentle laxatives, aided by mild injections. This, however, is often a matter of considerable difficulty, arising, I imagine, from a weakened or paralysed state of the muscular fibres, which has been produced by the inflammation. I cannot say with confidence what is the best mode of treatment, but I think that mild medicines, in moderate doses, repeated at short intervals, and steadily persevered in, succeed better than the more powerful. Perhaps long-continued friction of the abdomen may be useful, and warm-bath. Our object should be to produce natural and healthy evacuation, and nothing more. Strong purging may be followed by a tympanitic state of the abdomen, not to be recovered from.

In all cases of active inflammation, bloodletting can be of little avail except it be used at an early period, and pushed to such an extent as to make a decided impression upon the system, indicated by weakness of the pulse, paleness, and some degree of faintness. During this state of collapse, an impression is made upon the disease, which, however, is often lost, as soon

as the circulation has recovered its former vigour. On this account, in every inflammation of a vital organ, it is, I think, of essential importance, that the first bleeding be carried to such an extent as to make a most decided impression, and that attention be paid to prevent this advantage from being lost, by repeating it after a short interval, whenever the effect of the former begins to subside. In various inflammatory diseases I have used with manifest advantage the following method. The treatment is begun with a full bleeding, which produces weakness of the pulse and a considerable degree of faintness; the latter soon subsides, but the pulse continues weak for a longer time. Whenever it begins to recover from this weakness, a small bleeding is repeated, so as again to break the force of it, and for this purpose, perhaps, no more may be required than five or six ounces. Such a bleeding is again repeated at another very short interval, and so on till we have reason to believe that the disease is subdued. The advantage of this method is twofold. (1.) By thus keeping up the effect of the first bleeding, the disease is likely to be checked at a very early period; and, (2.) The quantity of blood that is lost, is in the end much smaller than may often be required under other circumstances. For if, instead of this, we allow the patient to lie after the first bleeding ten or twelve hours, or even a shorter period, the effect of it is often entirely lost, and it is then necessary to repeat it to the same extent as before. Twenty ounces of blood may be required upon this method for producing that effect upon the system, and, consequently, on the disease, which, on the other, may be procured from five; and, besides this, in the interval the disease has been gaining ground, its duration is protracted, and the result consequently rendered more uncertain. The inflammation of a vital organ should not be lost sight of above an hour or two at a time, until the force of it be decidedly broken; and except this take place within the first twenty-four hours, the termination of it must be considered as doubtful.* On this important subject I shall only add the following beautiful illustration of the effect of bloodletting in inflammatory diseases. A man, aged 24, after being for several days affected with acute rheumatism, was seized with a strong pulsation in the region of the heart, which, after two days, was accom-

* In a violent inflammatory case, in which it is probable that repeated bleeding may be necessary, great benefit is obtained from the very simple expedient of inserting a little ointment between the lips of the orifice after the first bleeding. Adhesion is thus prevented, and blood may be taken from the same orifice many times.

panied by acute pain in the same situation, and anxious oppressed breathing. These symptoms had continued one day when I first saw him; the pain was violent, and impeded respiration; the breathing was so much oppressed as to prevent him from lying down, and the pulsation of the heart was so violent that it could be felt by the hand over every part of the thorax, and even on the upper part of the abdomen. The pulse was 106, and intermitted about twelve times in a minute. Several of his joints were still affected; his feet and ankles particularly were swelled and intensely painful, incapable of bearing the slightest touch or motion, and in a state of high vivid inflammation, resembling erysipelas. He was bled to above thirty ounces, which he bore without faintness. Two hours after I found the symptoms somewhat relieved, but by no means removed, and the inflammation of his feet as before; the pulse 112, and strong. He was then bled to eighteen ounces. When that quantity was taken he became extremely faint, and the pulse exceedingly weak; and he lay in that state of faintness for upwards of half an hour. During this time every symptom in the thorax was removed, and the inflammation of his feet completely disappeared; they became of a pale and natural colour, and could be pressed or moved in any way without uneasiness. On the following day he continued well. After another day or two the rheumatic affection returned to his ankles, but in a slight degree, and without fever, and it soon yielded to the usual remedies. The value of this case depends on the beautiful illustration, furnished by the disease on the ankles, of what was probably going on within, and of what probably takes place in every internal inflammation when the remedies are employed in a decided manner.

Before I conclude these very general remarks, I would briefly allude to some circumstances which often occur during the treatment of enteritis, and which are apt to embarrass the young practitioner.

1. The pulse continuing very frequent after the local symptoms appear to be considerably subdued by repeated bleeding. While this continues there is always danger of the inflammation being renewed. In this state digitalis is given very freely with much advantage.

2. A tympanitic state of the abdomen. If this occur before the inflammation is subdued, the prognosis is extremely unfavourable. But it may occur after the disease is checked, from a temporary derangement of the muscular action. It, however, requires most minute attention. Gentle friction may be employed, and the pressure of a roller. Mild injections are useful,

to which a little assafœtida may be added; but I think I have seen the greatest advantage in this condition from injections containing bark in powder in large quantities. Mild laxatives may be given, but medicines that would act strongly are to be avoided. These excite for the time, but when their action is over the parts are only still farther exhausted, become again distended, and may pass into gangrene. The disease is a loss of muscular action which is left by the inflammation, and it requires the most delicate management. It has frequently an alarming appearance, and may leave for a considerable time a deranged action of the parts, which often assumes the characters of organic or mesenteric disease. A boy, aged six, had acute pain in the abdomen, much increased by pressure and by inspiration; short, anxious breathing; pulse extremely frequent. He was bled from the arm, and took some laxative medicine which operated, and he was very much relieved. He then did well for two days, when, on visiting him at night, I found him oppressed and restless; countenance anxious; pulse above 140; the belly enlarged and tympanitic, and painful on pressure. Injections, containing bark in powder, and some tincture of assafœtida, were given every three hours with great relief, with friction, &c. Under this treatment the affection soon subsided, and in a few days he was able to be out of bed, but he continued feeble and sallow, with some cough, bad appetite, frequent pulse, and a withered emaciated appearance. Being sent to the country he recovered gradually, and is now in perfect health, but he continued in the state which I have mentioned for several months. I am persuaded that many cases, especially in children, which assume the appearance of mesenteric disease, depend upon a morbid condition of the muscular action of the canal, which impedes the process of digestion and assimilation. It is treated by good air and exercise, tepid bath, friction of the abdomen, with gentle compression, and vegetable bitters, as the colombo powder, combined with small doses of rhubarb or aloes.

3. A state different from the former, in which the abdomen is somewhat enlarged but hard, almost resembling, in some cases, a mass of organic disease. This is a formidable symptom, but if it occur after the inflammation is subdued it may be recovered from. The nature of it is obscure. It is certainly connected with some degree of intestinal distention, but it is not tympanitic; it is hard and tense, sometimes painful on pressure, and has an alarming appearance. A young man, aged 17, whom I attended in a severe attack of enteritis, was free from complaint about the 7th day from the attack. On the 9th his pulse began to rise again; and his belly, especially about

the lower part, became enlarged, very hard, and painful on pressure; the bowels open; his pulse, when sitting up, 120. In this state, in spite of every remonstrance, his friends carried him to the country. I expected to hear of his death, but the affection gradually went off, and he returned to town, in a few weeks, in perfect health.

4. Cessation of the pain, sinking of the vital powers, great weakness of the pulse, and coldness of the body. These are generally considered as indicating gangrene, and, consequently, a hopeless state of the disease. I have in the former paper on ileus produced evidence of the most important principle, that these symptoms do not necessarily indicate gangrene. I have shewn them connected with inflammation which was slight and recent, and I have shewn them recovered from. I shall now only add the following example. A man, aged 40, was affected with enteritis in the usual form, for which he was treated in the most judicious manner by a respectable practitioner. On the 5th day the pain ceased; the pulse was 140, and extremely feeble and irregular. His face was pale, and the features contracted, and his whole body was covered with a cold perspiration; his bowels had been moved. In this condition I saw him for the first time. Wine was given him to the extent of from two to three bottles during the first twenty-four hours. On the following day his appearance was improved, his pulse 120, and regular; the wine was continued in diminished quantity. On the third day the pulse was 112, and in a few days more he was well.

In a case such as this there could be no doubt as to the only mode of practice that could be attempted, but there are cases in which, at a particular period of the disease, wine is given with much advantage, though the symptoms are much more ambiguous; and it is often extremely difficult to decide upon the plan which ought to be adopted. A lady, aged about 35, on the 7th day after delivery, was seized with violent pain over the whole abdomen, most severe across the stomach and towards the right side; much tenderness on pressure; urgent vomiting; great restlessness; respiration short and oppressed; pulse 140, and sharp. The pain was aggravated by inspiration, and by every motion of the body. She was bled and blistered, and took laxative medicine, which operated freely. After the bleeding she was very much relieved; could breathe without uneasiness; the vomiting subsided, and the pulse was much diminished in frequency. This was in the night. On the following day the pulse rose to 150; the breathing was quick, short, and oppressed; some vomiting; countenance anxious; there

was neither pain nor tenderness of the abdomen, which was to the feel soft and natural; lochia natural. Wine was given in the quantity of a small glass every hour; and injections of beef-tea, each containing ℥ss. of bark in powder, and 60 drops of laudanum. These were repeated as often as they were discharged, which was generally from one to two hours. After some hours the symptoms were improved. Next day the pulse was from 125 to 130; on the third day from 112 to 120. Thus she gradually recovered, having continued to take a bottle of wine in each twenty-four hours. For some time she suffered severely from an aphthous state of the mouth and throat, accompanied by burning uneasiness at the stomach, and pain in the bowels. These complaints yielded to a decoction of logwood.

II.

On the Doses of the Ancient Physicians. By E. Milligan, M. D. Lecturer on the Institutions of Medicine.

Happening, during last summer, to look into some ancient writers on medicine, my attention was particularly attracted by a feature of their practice of which I can no where meet with a satisfactory explanation. As the subject seems curious, it may, perhaps, be worth while to notice briefly in this Journal the results of a hasty inquiry into its origin and reality. To those possessed of more ample means of information they may appear jejune and puerile: and if any such condescend to correct their errors, by the same channel in which they are now humbly offered to their notice, I shall candidly acquiesce in this imputation.

The difficulty here alluded to occurs in the doses of medicines exhibited by the ancient physicians. These have long been observed to be very large; * and it was on remarking the impossibility, according to our ideas, of exhibiting them with safety to human life, or even of escaping destruction under their influence, that my observation was first drawn to the subject of ancient posology.

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* Arbuthnot on Ancient Weights and Measures, p. 286.

Dioscorides, who lived under Nero, and who, as he informs us, had attended to the subject of the materia medica from his earliest years, may be taken as indisputable authority on this point; especially, as we are informed by Suidas, that he practised as well as studied medicine; * and his work stood in such high estimation among the ancients as to be copied literally in many parts by Pliny, though almost a contemporary. Indeed, whoever peruses his own excellent work on the materia medica with attention, will seek little farther for proof of his accuracy and diligence; and he and Pliny must always be cited as examples of the triumph of genius and industry over the harassing toils and interruptions of a military life. † It was not the intention of Dioscorides to deliver formally the dose of each medicine along with its natural history and medical application, and, therefore, it is only occasionally that we find him particularly describe the quantities and forms in which they must be exhibited. He, indeed, explains in one place why the doses were not comprehended in his work; and as the passage leads to a curious fact in the history of physic, we shall deliver it in his own words. Whilst treating of the white hellebore, a most important article of ancient materia medica, he adds, "Mensura dispensatioque ejus ab HIS tradita est, QUIBUS praecipuum fuit studium de eo (περὶ τῆς δόσεως αὐτῆς,) docere. Nosque Siculo ab Ethna Philonidæ in ea re subscribimus, longum enim fuerit materiam medicam ex proposito tractantes, faciendae medicinae rationem docere." ‡ Hence it appears that the ancients carefully separated the posological part of medicine from the materia medica; and with good reason, as, besides being too bulky an addition to the multifarious information of that science, it would have put the more ostensible part of the art into the hands of the vulgar, as the uninitiated of those times dabbled quite as much in physic as they do at present. We see likewise that they were in possession of distinct treatises on the subject of posology, and that the person here mentioned, Philonides the Sicilian, was an eminent author in that department. This passage likewise explains to us why Hippocrates, Celsus, Dioscorides, Pliny, and all the earlier writers on medicine, so rarely mention the dose even of the most powerful medicines; and, without some such key to their motives, Dr Arbuthnot § might well wonder at Hippocrates so carefully dosing his slops and

* By himself, also indirectly, De ver. albo. Lib. IV.
† Dios. Praef.
‡ Dios. Lib. IV. de veratro albo.
§ Ancient Weights and Measures, 288.

asses' milk, whilst the most acrid remedies are apparently left to the discretion of the practitioner or his patient. I shall, however, in what follows, endeavour to throw some additional light on this peculiarity of the ancient physicians, though, from the above, it is evident that a reference to the books of posology was always implied in the passages where the quantity and circumstances in which a medicine should be given are not specified by these authors.

Wishing to discover, if possible, whether some general multiple of our present doses might not be detected in the doses of the ancient physicians, I selected from the work of Dioscorides, all the medicines of whose composition and identity no doubt can be entertained, noting particularly such as must, when given in excessive quantities, produce the most violent effects. The history of each of the *latter*, as given by Dioscorides, was then carefully inspected, and the doses, with their proposed object, written down. A medium of them all, if not already given by the author himself, was afterwards computed; and a corresponding medium dose, at the same time, extracted from the posological table given by Dr Duncan junior in his excellent Dispensatory. The results were set down in the following table, wherein the drachm is taken at 62 grains, as ascertained by the famous antiquarian Greaves, * and admitted by Dr Arbuthnot † as nearly correct. To enable the general reader to compare these measures of the text with the modern troy weight, another table is subjoined, containing most of the medical weights and measures anciently in use.

Comparative Table of Ancient and Modern Doses.

Aloes. In haemoptoe, cochl. ij. In icterus, ob. fij. ad ʒi.; for free purging ʒiij.

In grains 310 31 62 186 medium 62, modern medium 15, but $\frac{62}{15} = 4.133$

Sulphate of Copper, for worms ʒi.

In grains 62 0 0 0 —— 20 —— 5 — $\frac{20}{5} = 4.000$

Elaterium, common dose, ob. j. smallest dose, ob. ss., to infants chalc. ij.

In grains $10\frac{1}{2}$ $5\frac{1}{6}$ 2 0 —— $10\frac{1}{2}$ —— 2 — $\frac{10\frac{1}{2}}{2} = 5.166$

Oxide of Copper, as an expectorant, ob. iij.

In grains 31 0 0 0 —— 20 —— say 5 — $\frac{20}{5} = 4.000$

Scammony, for a purge ʒi. aut ob. iiij., for a laxative ob. ij.

In grains 62 $41\frac{1}{3}$ $20\frac{2}{3}$ 0 —— 30 —— 8 — $\frac{30}{8} = 3.750$

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* Dissert. on Roman Denarius.

† Ancient Weights and Measures. He makes it $62\frac{1}{2}$.

SQUILL, to purge off bile, ob. iij.

In grains 31 0 0 0 medium 10 modern medium 2 but $\frac{10}{2} = 5.000$

BLACK HELLEBORE, to purge off bile or pituita 3i., or ob. iij.

In grains 62 31 0 0 —— 42 —— 15 — $\frac{42}{15} = 2.800$

7)28.849

Mean quotient, 4.121

TABLE of Ancient Medical Weights and Measures, reduced to their equivalents in Modern Troy Weight.

1 sextans = 1 obolus = 10 chalci* = 10⅓ grains.
1 drachm = 1 denarius = 6 sextantes = 6 oboli = 60 chalci = 62 grains.
1 uncia = 3 cochlearia = 7 drachms † = 7 denarii = 42 sextantes = 42 oboli = 420 chalci = 434 grains.
1 cyathus = 4 cochlearia = 10 drachms = 10 denarii = 60 sextantes = 60 oboli = 600 chalci = 620 grains.
1 cochleare = 2½ drachms = 2½ denarii = 15 sextantes = 15 oboli = 150 chalci = 155 grains.
1 acetabulum = 15 drachms = 15 denarii = 90 sextantes = 90 oboli = 900 chalci = 930 grains.
1 hemina = 60 drachms = 60 denarii = 360 sextantes = 360 oboli = 3600 chalci = 3720 grains.
1 sextarius = 2 heminae = 120 drachms = 120 denarii = 720 sextantes = 720 oboli = 7200 chalci = 7440 grains.
1 congius = 6 sextarii = 12 heminae = 720 drachms = 720 denarii = 4320 sextantes = 43200 oboli = 43200 chalci = 44640 grains.

The candid reader will easily perceive, that the numbers given in the former table as modern medium doses are not meant for *moderate* doses of the medicines there mentioned; they are merely the arithmetical mean of the extremes given in Dr Duncan's table; for this being the mode in which I have generally assumed the medium of the ancients, I thought it fair to compare it with the modern medium obtained in the same manner, besides the advantage of having the authority of a physician and author so justly celebrated in this department. It produces no other difference in the general result than that of making the disproportion between the ancient and modern doses too small.

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* My reasons for dividing the obolus into ten chalci, and not into six, as Arbuthnot and others have done, will be given at length in my edition of Celsus; meantime the reader may consult Pliny XXI. 34.

† Not 8 drachms, as the common ounce. The excellent Arbuthnot (284) was misled by not comparing the above passage of Pliny with Celsus. V. 18, 1.

As Dioscorides appeared the most authentic and judicious evidence, his doses merited the first place; his numbers, besides, are often written in compound Greek words, so as to preclude all possibility of mistake by the transcriber. But, on proceeding to examine the other authors who have given the doses of violent medicines, we shall find the coincidence appear so perfect as to remove any shadow of doubt that might still remain respecting the single testimony of Dioscorides.

The most perspicuous and precise author of all antiquity is Celsus; and being engaged at the time of the inquiry in preparing an edition of that author, I set about examining the few doses which he has delivered.

1. The famous antidote of Mithridates consisted of thirty-five different ingredients, mostly aromatics and bitters combined with opium, so that 10743 gr. contained 248½ of opium or $\frac{1}{43}$. Celsus (179) gave this as an anodyne to the size of an Egyptian bean, whose dimensions, indeed, are not well known, but which, as Dioscorides informs us, was larger than a common bean. Rhodius, ad Comp. Larg. 95, makes it of the same weight as a victoriatus, or two scruples; but he makes the common bean a drachm, *Ad Scrib.* 13, and, therefore, we must consider the Egyptian bean as heavier than a drachm. But as an anodyne it was given to the bulk of an almond, or four times the size of the former, in which case it would contain about six grains; for $\frac{62}{43} = 1\frac{1}{43}$, and $1\frac{1}{43} \times 4 = 6$ grains nearly, which, instead of being an antidote for poison, might, in modern times, itself prove fatal; at any rate, the party who previously swallowed such a dose must have made a poor figure at those splendid but treacherous entertainments of the ancient great, where death so often lurked in the cup which the Dii Geniales had in vain consecrated to friendship and festivity.*

2. The cough mixture of Athenio, 248 grains to 62 of opium, dose, an Italian bean. Now, $\frac{248}{62} = \frac{4}{1}$. Call the bean even ℈ij. or 40 gr. and $\frac{40}{4} = 10$ grains of opium in the dose.

3. Another cough-mixture had opium $\frac{248}{62}$, or one in four parts as before, and the same dose, or rather its double, being two catapotia of the size of a common bean; therefore, = 20 grains.

4. A composition for Ischuria had opium $\frac{4998}{434} = 1$ part in

* "When thou sittest to eat with a ruler, consider diligently what is before thee; and put a knife to thy throat if thou be a man given to appetite. Be not desirous of his dainties, for they are deceitful meat."—Prov. XXIII. 1, 2, 3.

9.9 or 10; but $\frac{62}{10} = 6\frac{1}{5}$ grains of opium for a dose; for this is what was contained in the Egyptian bean.

Throw these together as above, and we have

TABLE of Doses from Celsus.

Mithridate, a dose of	6 gr.	$\frac{6}{4} = 1\frac{1}{2}$
Athenio's cough-mixture,	10	$\frac{10}{4} = 2\frac{1}{2}$
Another do.	10	$\frac{10}{4} = 2\frac{1}{2}$
A mixture for ischuria,	$6\frac{1}{5}$	$\frac{6\frac{1}{5}}{4} = 1\frac{7}{20}$

We see, by the above Table, that when the enormous doses of Celsus are divided by 4, which is the quotient of the mean ancient doses by the mean modern, * that they then assume a rational magnitude, and, indeed, such as would be given at the present time on his indications. Yet I am not inclined to insist much on the force of this coincidence, as the evidence from other authors is much more direct.

Hippocrates, like the rest, rarely mentions doses; but when he does it is exactly in the same excessive ratio. He gives an obolus, or $10\frac{1}{2}$ grains of elaterium, in a female case. † His other very few doses specified are not of substances that afford any decisive information to our inquiry.

Scribonius Largus gives a catapotium for a cough with expectoration, in which the opium makes $\frac{1}{2}\frac{7}{16}$, or $\frac{1}{9}$ of the whole composition, yet he gives three or four pills of the size of a vetch pea in the course of the night. Say the pill weighed only 2 gr., yet 2 × 3 or 4, will give 6 to 8 grains of opium for one night's dose.

The same author gives another catapotium for an old cough, which has $\frac{62}{137}$ of opium, or $\frac{1}{2}$, and this is likewise given three or four times a night to the size of a bean, amounting to nearly a scruple of opium!

His cough pastilli, or lozenges, weigh 31 grains, of which the $\frac{1}{7\frac{1}{2}}$ is opium, or each lozenge contains four grains. For Ischuria he gives a drachm, or 62 grains of a medicine which has $\frac{62}{11}$ or $5\frac{1}{2}$ grains of opium in it.

* P. 189, supra. † De Superfoetatione.

Marcellus lived under the Emperor Gratian and Theodosius, and is said to have been an empiric. He gives 31 grains of aloes for a laxative, and this in many formulae.

Of a purging medicine, $\frac{2}{3}$ of which consisted of scammony and black hellebore, he gave the size of a hazel-nut, probably a drachm.

He gave troches weighing ʒi. in Nephritic pains, and the $\frac{1}{6}$ of these was opium; hence $\frac{62}{6} = 10\frac{1}{3}$ grains of opium in each dose.

Rufus Ephesius orders pulp of colocynth for a purge ʒi. or 62 grains. Aloes ʒij. or 124 grains of the juice of tithymallus (very acrid) ʒi. = 62 grains. Paulus Aegineta gave for purging medicines the following doses: of aloes ʒi. = 62 grains; of black hellebore, ʒi. = 62 grains; of scammony, 4 oboli, or 42 grains; of colocynth, ʒi. = 62 grains; of elaterium, 3 oboli, or 31 grains; of the oxide of copper, 31 grains.

The same author gives compound purgatives, with doses agreeable to the simple ones just given. Thus the famous "Purgatoria ex Hermodactylo Podagrica," or Arthritic purgative of Colchicum, now ascertained * to be identical with the "Eau Medicinale d'Husson," is given by him as follows:

"Purgatoria ex Hermodactylo Podagrica."

"Hermodactyli quadrantem (= ℥iij.

"Anisi, Cumini Æthiopici, ameos, thymi corymborum, piperis albi, zingiberis, singulorum ℈iij., epithymi ʒss. Dosis ℈iv.—aliqui sex dant. Dantur manè cum condito, aut aqua mulsa, aut mero fervefacto."

On calculation, it easily appears that one-third of the composition is colchicum root: and the less daring practitioners, therefore, who ordered ℈iv. of this medicine were giving $\frac{81}{3}$, or 27 grains of colchicum root to their patient.

Aretaeus seems to give similar doses, but, like the rest, mentions very few. To bring the whole of these observations into one view, we shall throw them into a tabular form.

Tabular View of Ancient Doses continued.

I. Hippocrates.

Elaterium, in dose of $10\frac{1}{3}$ gr.	but $\frac{10\frac{1}{3}}{4}$	$= 2\frac{1}{2}$ gr.

* Vide Medico-Chir. Transactions.

II. Scribonius Largus.

Cough pill, having of opium 6 to 8 gr.	$\frac{6\text{-}8}{4\text{-}4}$	= $1\frac{1}{2}$, 2 gr.
Old cough-pill, do. 20	$\frac{20}{4}$	= 5
Cough-lozenge, do. $5\frac{1}{2}$	$\frac{5\frac{1}{2}}{4}$	= $1\frac{1}{2}$
Medicine for ischuria, do. $5\frac{1}{2}$	$\frac{5\frac{1}{2}}{4}$	= $1\frac{1}{2}$

III. Marcellus.

Aloes for a laxative, in many formulae, 31 gr.	$\frac{31}{4}$	= 8 gr.
Purge of Scammony & Hellebore, 31	$\frac{31}{4}$	= 8
Nephritic Troches, having opium $10\frac{1}{2}$	$\frac{10\frac{1}{2}}{4}$	= $2\frac{1}{2}$

IV. Rufus Ephesius.

Purge of Colocynth pulp, 62 gr.	$\frac{62}{4}$	= 15
——— Aloes, 124	$\frac{124}{4}$	= 31
——— Juice of Spurge 62	$\frac{62}{4}$	= 15

V. Paulus Aegineta.

Purge of Aloes, 62 gr.	$\frac{62}{4}$	= 15
——— of Black Hellebore, 62	$\frac{62}{4}$	= 15
——— of Scammony, 42	$\frac{42}{4}$	= $10\frac{1}{2}$
——— of Colocynth, 62	$\frac{62}{4}$	= 15
——— of Elaterium, 31	$\frac{31}{4}$	= 8
——— of Oxide of Copper, 31	$\frac{31}{4}$	= 8
——— of Colchicum root, 27	$\frac{27}{4}$	= $6\frac{3}{4}$ *

* I have not taken the trouble to calculate Dr Duncan's arithmetical mean corresponding to these doses, but the reader can easily do this for himself.

From all these facts taken together, it appears that the ancients, from Hippocrates downwards, were in the habit of giving doses at least four times stronger than ours, and that this ratio obtains with remarkable uniformity through all their works, embracing a period of time little short of a thousand years. The coincidences are so numerous that no one can ascribe them to chance; indeed, we can easily trace the dose of Dioscorides and the older writers copied into the pages of the latest, as of Paulus and Marcellus. Let it not be imagined that these extraordinary doses are culled from amongst a great many where the quantity was moderate. I have no where done so, but have always noticed their ordinary doses when the ancients themselves mention them as such. Where, on comparison with the ancient authors, the learned reader may form a different opinion, I would beg him to consider that we, at this time, can only judge of their mode of prescribing by what I call the IMPOSSIBLE doses, just as we arrive at truth in other sciences by the "*reductio ad absurdum.*" It is on this mode of reasoning, and the discovery of a secret quadruple subdivision of doses, that the interest of the present inquiry, if it has any, must rest; for the labour of turning over ancient books, and comparing examples, is a drudgery too trite and mechanical to deserve much attention from the readers of this studious, intellectual age.* He must remember that no judicious physician of the present day prescribes an active medicine to its utmost dose in compositions wherein it is only of collateral benefit; and our posterity would judge very much amiss of our ordinary doses of opium if they were to deduce them from the dose of the London Paregoric, or the Electuarium Catechu Compositum of the Edinburgh Pharmacopœia. It follows, that occasional moderate doses, did they even occur more frequently in ancient authors, could not decide the matter at issue.

On what principle, it may be asked, are these extravagant, nay, murderous, doses of the most acrid and poisonous matters to be explained? Does there, after all, exist some mistake in the numbers from long continued and careless transcription? or do we entirely mistake the true weight and relation of the Roman denarius† to our drachm troy?—Did the ancient phy-

* Accordingly, wherever it was convenient, I have borrowed freely from the labours of Arbuthnot, just as any one is at liberty to borrow from these.

† The Roman denarius is still extant in abundance; and its relation to the other weights is so precisely described by the ancients, that its weight troy being known, all the others are obtained in grains by simple proportion. See the table given above. Pliny, xxxiv. 5, seems to insinuate that their alloy was

sicians really exhibit these doses to patients who, from early habits of activity and exercise then almost universal, had bodies able to resist their influence? Or, did they, in order to conceal the art from the profane vulgar, purposely falsify, and for convenience, do this in a certain quadruple ratio?—employing weights graduated indeed like those in common use, but secretly understood to be subject to this fourfold division? Each of these conjectures may seem to merit attention, and I shall close this communication with a few remarks on their individual probability.

I. That the doses above, extracted from the ancient authors, have not been altered by the transcribers, is clearly shewn by the fact, that many of them are not in characters, or numeral abbreviations, but in written words, Greek compounds, such as the word τριόβολος, for example, which could not, by any conceivable chance, have been substituted for its fourth part or eight grains; yet this is the term by which Dioscorides denotes the dose of squill requisite to purge off the bile. Indeed, had any error crept into the text of the older authors, it would never have been copied into the succeeding writers, who were generally practitioners, and could not mistake the dose of medicines so familiar, and whose mode of preparation is so precisely described.

II. There may still seem grounds for believing that the moderns have not a correct estimate of the weight denarius, and that there is, therefore, no accurate method of ascertaining the absolute relation of the ancient weights to those of our times. But the ancient denarius, or drachm, (for they are equivalent terms,) was a common Roman money, about the weight of three sixpences of our present* coinage, and is still to be met with abundantly amongst the dealers in old coins; and numbers of them exist in various public collections in a state of high preservation. Mr Greaves, the famous antiquarian, weighed many hundreds of them in different countries, and found the medium weight of the denarii consulares to be very steadily 62 grains, whilst the attic tetradrachm, corresponding to our crown piece, and which ought to weigh four times 62, or 248 grains, at an average, weighs four times 67, or 268 grains, making the drachm 67 grains. The latter, however, is evidently a provincial varia-

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† in his time, though modern chemists maintain that the ancient coins are nearly pure.

* 1816.

tion, of which we have abundance of examples in our own country and times;* indeed, the measure of the congius of Vespasian, a standard vessel which is still in existence, agrees so exactly with the former weight of the denarius, 62 grains, that there cannot exist a rational doubt of its exactness. A judicious and learned friend, who has spent a considerable time in Italy, and whose connections and pursuits naturally gave an interest to the inquiry, found the present drachm used by the apothecaries of Italy to correspond exactly with the ancient Italian denarius or drachm, (ascertained by Greaves,) consisting of 62 grains troy. Indeed, it is natural to suppose, that, of all other places, the apothecary's shop must be that where uniformity would be longest and most exactly preserved; deviations there being attended with the most immediate and fatal consequences, whilst the usual motives for change are totally wanting, their goods being generally bought in by a different weight. The same excellent physician conjectures, and with great probability, that, were any one to make the experiment, the above weight of 62 grains troy would still be found in the apothecaries' drachm of modern Greece, unaltered, perhaps, since the days of Aristotle.

III. Did the ancient physicians then really exhibit the above doses to their patients, who, from early habits of activity and exercise, then almost universal, may be supposed to have had bodies able to resist their influence? This explanation cannot, I fear, be admitted. It is incontestibly established that the bodies of the Greeks and Romans, whose physic we are considering, were not larger than those of the present race of mankind; nay, more,—we have the constant unbiassed evidence of their own historians, orators, and poets, that their stature and bodily strength was considerably inferior to that of the Asiatics of the south, or of the Gauls to the north of their country. As it is probable that little change has taken place in the personal strength of the latter, who were true Celtae, that tribe, like the Jews, having a wonderful tendency to retain their primitive habits; so, reasoning upwards, it follows, that the ancient Greeks and Romans must have possessed less personal vigour, and, therefore, must have less resisted the action of excessive doses than a modern Welshman or Scotch Highlander, whose vis medicatrix would, notwithstanding, be somewhat staggered at

* The cause of this difference seems to have been the alloy, which is commonly $\frac{1}{12}$, and which the ancients probably did not consider of any value, and, therefore, only estimated the weight of these coins by the pure gold or silver contained in it. This supposition is simple, and explains the difference exactly.

a 20 grain dose of opium or sulphate of copper. Much, however, may be said on the other side of the question; and the almost total absence of diseases of debility, of scorbutus, the cutaneous tribes, affections of the heart, of typhus fever, of scrofula, of rickets, of chronic rheumatism, in the medical works of the ancients, would seem to savour something of modern degeneracy. Their lives were much more debauched than ours, and had their constitutions been as weak, the same consequences must have been observed. Indeed, their general practice of vomiting in order to sharpen the appetite must have given such a shock to the system as few of our modern gourmands would like to undergo for the enjoyment in prospective; yet this practice had prevailed from the most early times, since Hippocrates alludes to it, but thinks it wiser to vomit but once a fortnight. The instances of debauch given by their authors far exceed the eating and drinking matches of the English newspapers,—nay, many of them were habitual. Thus Cato allowed his slaves individually, during the Saturnalia, seven pints, or four bottles of wine, per diem, which would appear in this age rather a liberal allowance. Cicero's son was called Bicongius, because he was accustomed to drink two congii off at a draught. But two congii are seven quarts or eight bottles of wine! the wine may have been weak, but who of these times could have drank off as much water with impunity? Pliny and others abound in such examples, many of them much more wonderful, the present being selected merely for the eminence of the individual and the impossibility of mistake in respect of quantity. Lastly, we find the most execrable instances of corporeal and mental depravity among the ancients enjoying uninterrupted health. The infamous tyrant and debauchee, Nero, was only three times sick in fourteen years. "Nam qui luxuriae immoderatissimae esset, ter omnino per XIV. annos languit; atque ita, ut neque *vino*, neque consuetudine *reliqua* abstineret;" *—and the like is reported of many others. Even the satirists, whose style was exaggeration, and whose proper subjects were vice and luxury, never mention other consequences than crapula or indigestion, from the disgusting gluttony of the times; very rarely even gout. Notwithstanding all this, however, we must incline to the former opinion, that the ancients were less robust than we are; it being now well ascertained, † that of all the two legged varieties of the creation, whether wild or tame, an Englishman

* Suet. de Nerone.

† See Lawrence's Physiology, Zoology, and History of Man.

possesses the highest muscular power; and hence, *a fortiori*, stronger than the Celts, who were, and are, as we have just seen, stronger than the ancient Romans.

IV. The only remaining mode in which this difficulty can be solved is by supposing, that, in order to conceal the art from the profane vulgar, the physicians of antiquity intentionally falsified their doses, and, for convenience, did it always in a certain uniformly quadruple ratio; employing weights, indeed, graduated like those in common use, but secretly understood to be subject to this fourfold division. We arrive at this inference by the method of exclusion, for we have seen above, that every other conceivable mode of accounting for the excessive doses of ancient medicine is without foundation. In supposing that this was the case, we do no more injury to the morality of the ancients, than to the moderns, in allowing that the practice of prescribing in Latin words and Roman characters is for the same purpose,* a thing which few deny, and many writers openly avow. That they CONCEALED their doses is manifest from their writings, and from the singular fact, that, though we have seen above that they had choice of books on posology, not one of these have reached us, either of Greek or Roman composition, being probably attainable to none but practitioners.

The facts are so obvious and striking, that Dr Arbuthnot, in the year 1727, formed nearly the same conjecture; and if concealment was practised, it is evident it was only by falsifying the weights and measures of the day in a *constant* ratio, that one medical man could become intelligible to another; or, indeed, have a motive for naming the dose at all, which otherwise must have been completely unintelligible to his readers. A secret understanding, then, of a diminution of the dose in a fixed ratio appears necessary, and as the tables given above show plainly enough that this ratio was a quadruple one, I shall not longer insist on it here, but with renewed request, that some one better qualified will take this curious circumstance into consideration, conclude these few remarks on a subject rather beyond my opportunities of inquiry.

21, *South College Street*,
Dec. 25, 1819.

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* "Scilicet qui non mulierculis aut circumforaneis medicis artem impertiar." —Greg. Consp.

III.

Case of Axillary Aneurism unsuccessfully Operated on at the Hotel Dieu. Communicated in a Letter, dated Paris, May 16, 1819. By Dr Rutherford, Royal Navy.

The subject of the second operation on the subclavian artery,* at present about 40 years of age, being formerly a soldier, was labouring under a constitutional venereal affection, which had already injured the nasal bones, and occasioned a falling down of the nose; when, in the year 1815, he received a wound from a flat-bladed lance, in the upper and fore part of the right arm a little inwardly, which penetrated in the direction of the axilla. Blood flowed profusely from the wound, but, the orifice being small, the hæmorrhage was easily stopped, and the wound healed by the first intention. At the end of a month, a small pulsating tumour was perceived in the axilla, which gradually increased to a considerable size and occasioned some pain, but it was only at the end of the 4th or 5th month that means were taken to remove it. A roller was now applied, from the extremities of the fingers to the shoulder and axilla, including the tumour, which at first diminished in size by the pressure; but the arm and hand became extremely feeble and emaciated without losing their sensation. At the end of six months from the first application of the bandage, its former good effects having ceased, whilst its bad ones continued, it was thrown away, and the tumour, abandoned to itself, remained stationary for a very considerable time, but the arm continued feeble, emaciated, and useless, which induced the man to learn to write with the left hand; and, being unfit to earn his bread in the country, he obtained a situation in Paris suitable with his infirmity. Here then he came only a short time before his entrance at the Hotel Dieu, for the tumour, having suddenly enlarged to a great size, extending itself under the pectoral muscle and elevating the clavicle, became, at the same time, so painful, and occasioned such excruciating pain in the arm, especially at night, that he was forced, in the course of eight

* Mr Dupuytren took up the subclavian artery above the clavicle on the 7th of March, and, although the patient is not yet discharged from the hospital, he is now, (the 9th of May,) except a little of the aneurismal tumour, which remains unabsorbed, perfectly cured. Having operated in this case privately in the ward, it gave much umbrage to the pupils, which induced him to perform the second operation publicly in the amphitheatre.

days from the commencement of this rapid increase, to quit his situation and apply for surgical aid.

On examining the patient, Mr Dupuytren found the pulsation distinct at the wrist, but much more distinct in the tumour, which was tense and so painful to the touch, that no pressure could be made on it. He endeavoured to moderate the present symptoms by bleeding, &c.; but, fearful of a sudden fatal event from the rapid progress of the disease, he decided on taking up the subclavian artery without delay: consequently, he proceeded to perform the operation on the 30th of March, being the morning after the patient's arrival at the hospital.

The patient being placed on a table, and his shoulders elevated by pillows, Mr Dupuytren having made an incision through the teguments about 2½ inches in length, commencing at the outer edge of the sterno-cleido-matoideus muscle, about half an inch above the clavicle, and extending towards the acromion process of the scapula, obliquely downwards to the clavicle, proceeded cautiously to dissect the cellular membrane down to the artery, securing every blood-vessel as soon as cut, and eight were secured, and eighteen minutes passed from the commencement of the operation, when the patient complained of such intolerable pain in the tumour and arm, aggravated by the application of the ligatures, that the operator was obliged, from the apprehension of convulsions supervening, to desist for some time, and ten minutes elapsed before he resumed the operation. He now continued to dissect cautiously as before, using the edge of the scalpel all the time, but was repeatedly forced to desist for a few minutes, owing to the complaints of the patient, and only one other vessel was secured, when, at the end of an hour from the commencement of the operation, the artery was brought into view. After much difficulty, from the great depth of the vessel, two inches or more from the surface, and the condensed state of the cellular membrane surrounding it, he succeeded in passing a grooved blunt-pointed hook (sonde cannulée) under the artery; but, owing to the necessary shortness of the curve of the instrument, the armed stilet or probe which, it was his intention to have run along the groove, could not be made to pass; he, therefore, was obliged to withdraw the grooved hook and employ a solid one with an eye in the point, into which, after passing under the artery, a thread was introduced by means of a common sewing needle, the thread being now passed through the eye in the point of the hook, a double ligature was fastened to it, (the thread,) and, the hook being withdrawn, the ligatures were

easily introduced conducted by the thread. In order to satisfy himself and all present, that the ligatures were really passed under the artery, Mr Dupuytren took hold of both ends of one of them between his finger and thumb, forming a loop, including the part surrounded, on raising which up, by putting the loop on the stretch, he ascertained distinctly that the pulsation ceased in the aneurismal tumour, and that it returned on relaxing the ligature and allowing the part to come into its natural situation. This alternate and synchronous cessation and return of the pulsation in the tumour, according as the loop formed by the ligature was put on the stretch or relaxed, having been repeatedly tried and proved, to the perfect satisfaction of all the pupils (or eléves) that were sufficiently near the operator to feel the part, one of the ligatures only was tied sufficiently tight to stop the pulsation in the tumour, but leaving, as Mr Dupuytren described it, a tremulous sensation. The other ligature was left as a ligature of safety: and thus ended the most tedious, the most painful to the patient, and the most difficult operation, such are his own words, that ever Mr Dupuytren attempted, having taken one hour and 48 minutes in the performance.

The above statement was written the day after the operation, collected from the account given by the operator, together with what I myself witnessed. Mr Dupuytren's report of the patient this day (31st March) was, although the pulsation continued in the aneurismal tumour, that the man was as well as could be expected, and he (Mr Dupuytren) said, he felt quite confident that the irritation given by the ligature on the artery would excite sufficient inflammation to occasion adhesion of its coats, and thus, that the intention would be fulfilled whilst the patient was saved from the pain attendant on drawing the ligature tight. April 1st, The pulsation is as strong as ever in the tumour, which rapidly increases in size. The patient's sufferings from the pressure and distention of the tumour have not been relieved by the operation. April 2d, The sufferings of the patient from the effects of the operation are not considerable; but the pulsation, pain, and tension of the aneurismal tumour, continue as troublesome as ever. Pounded ice, in a bladder, is directed to be applied, at intervals, on the tumour. April 3d, The patient feels much as yesterday; the skin covering the tumour begins to assume a livid appearance. April 4th, A slight hæmorrhage took place yesterday evening from the wound; this hæmorrhage, however, was suspended without much difficulty by means of a compress applied over the dressings; ice continued at intervals, as usual. 5th, An alarming

hæmorrhage took place this morning from the wound; this hæmorrhage was suppressed with great difficulty, Mr Dupuytren having found it necessary to undo the dressings, and stuff the wound from the bottom with dossils of lint rolled in powdered rosin, (colophane,) over which a compress and bandage were firmly applied; the ice is still continued at intervals on the tumour, which becomes still more discoloured. 6th, There has been little or no bleeding from the wound since the stuffing yesterday, which has suspended the pulsation in the tumour to which the ice is still applied. The patient appears languid and feeble, and suffers considerably from the tightness of the compress and bandage, the pain of the tumour and arm, &c. 7th, In the evening of yesterday the patient suddenly sunk into a state of stupor, and assumed a moribund appearance; he seems anxious and restless, though insensible to surrounding objects. Gangrene makes a rapid progress in the tumour. He died in the course of the day.

On examining the seat of the operation, the ligature that had been tied was found knotted loosely on one of the cervical nerves, * and the ligature of precaution untied beside it. The subclavian artery, lying on the inner side and below the nerve, was perforated to its centre on the side next the ligature, the other half remaining sound. From this appearance, it is obvious that the artery was not included in the ligature, and Mr Dupuytren is of opinion, that the instrument passed right through its coats in the operation, so as to take up one half of it, which was cut by the ligature in the course of four days and a half, and then that hæmorrhage took place. This, he says, is the only way in which he can account for the circumstance of the pulsation in the aneurismal tumour having alternately ceased and returned, according as the loop made by the ligature previously to its being tied, was put on the stretch or relaxed, as already described; but then, he adds, it remains to be accounted for, why, according to this opinion of a blunt hook having penetrated the coats of the subclavian artery and traversed its canal, hæmorrhage did not take place immediately; and how the wound, under these circumstances, could remain four days and a half, without even the slightest bleeding. Surely the thing is incredible, and I am humbly of opinion, that all the phenomena may be explained on more rational principles by supposing that the hook, and consequently the ligatures, passed between the nerve and the artery, very

* That portion of the 4th cervical, which afterwards becomes the external cutaneous or musculo-cutaneous nerve.

close to the latter, including part of the condensed cellular membrane, attached to and enveloping it; the ligature being thus, as it were, fastened to the artery, on being pulled up by both ends with some force, would pull the artery with it at that particular part, forming a sharp angle which would break the force of the circulation, and suspend the pulsation in the tumour, or at least render it very obscure; in this way, indeed, the effect on the circulation would be nearly the same as if the ligature was really underneath the artery. And, by the bye, this appears to me a very important fact in the operation for aneurism, as it shows that the alternate suspension and return of the pulsation in the aneurismal tumour, corresponding with the tension and relaxation of the loop formed by the ligature previously to its being tied, although a very good proof, is by no means a proof positive that the artery is included in the ligature.

The circumstance of the hæmorrhage taking place between the fourth and fifth day may be accounted for, by supposing, as is very probable, that the blunt hook, in passing by force through the condensed cellular membrane, had done such injury to the coats of the artery, which it probably even came in contact with, as to destroy their vitality in that part, and sloughing and ulceration consequently took place.

With regard to the circumstance of the pulsation in the aneurismal tumour having been reduced to a tremulous motion after the tying of the ligature, as described by Mr Dupuytren, the appearances on dissection render its veracity more than doubtful: besides, some of the eléves, who had an opportunity of feeling the part immediately after the operation, deny the fact, and assert, that the pulsation in the tumour was not suspended for one instant after the tying of the ligature. But it would be unjust to attribute this erroneous statement, on the part of Mr Dupuytren, to want of candour, or any intention or wish to deceive, as it may be easily supposed that the operator, from excess of zeal and natural anxiety for the success of his operation, might have been himself deceived: and, indeed, this would naturally lead one to reflect how cautious we ought to be in censuring men of more ordinary opportunities when we find that surgeon, whose situation, as sole surgeon of the Hotel Dieu, affords him more frequent opportunities of operating, and much more extensive hospital practice, than any other in the world, not only failing altogether in the object he proposed in performing the operation, (taking up the artery,) but suffering his zeal and anxiety to deceive his sense of touch afterwards. But, whilst we learn from this unsuccessful opera-

tion, a lesson of indulgence towards our brethren of less experience, we must not be the less guarded in our criticisms on the conduct of the more experienced operator in the present case: for, if we consider the unfavourable previous habit of body of the man, the great size of the aneurismal tumour, the elevation of the shoulder, and the sufferings of the patient previously to the operation, we shall readily perceive, that the confidence inspired by the uncommon success of a similar operation which he had performed a few weeks before,* could alone have induced him to attempt this one, and candour must admit, that greater dexterity, humanity, perseverance, and patience, have seldom been witnessed, than were manifested by Mr Dupuytren in the performance of it.

IV.

On the Acceptation of the Term Scorbutus, and on the prevalency of this Affection at different periods. By MARSHALL HALL, M. D., F. R. S. E., &c.

It has been recently stated by three most distinguished writers, that the disease termed Scorbutus or Scurvy is "now unknown in London, or nearly."† An argument is, in consequence, drawn in favour of the greater salubrity of the metropolis in the present day than formerly.

It has not, indeed, escaped the observation of medical authors, both the more ancient and the modern, that the terms scorbutus and scurvy were employed by physicians, as well as the vulgar, in a very vague and almost unrestricted manner. Willis, who wrote expressly on this affection, and whose authority I shall use in the following observations, states, that it is "multis in locis epidemia et ubique fere sporadica, qua scilicet fere nunc omnes laborant aut se laborare putant;" and he adds, after stating the great multiplicity of its symptoms, "immo, si accidens quoddam insuitatum, nec prius auditum in corpore

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* The operation alluded to in a former note.

† Heberden on the Increase and Decrease of Different Diseases.

Sir Gilbert Blane, Bart. Medico-Chirurgical Transactions, Vol. IV. in allusion to the description of Scorbutus by Willis.

Bateman on the Diseases of London, Introduction.

humano eveniat, cum ad certum morbid genus referri nequit, sine dubio statim illud scorbuticum pronunciamus."

Claremont and Sydenham justly complain of this abuse of the term scorbutus.* And Sir Gilbert Blane has more lately shewn, in the most lucid and affecting manner, how baneful such ambiguity in the use of medical terms becomes in its influence on the medical art, and on the best interests of humanity.†

If such were the habits of thinking, of writing, and of speaking on this subject, we cannot surely be surprised that the bills of mortality should be crowded with victims of the scurvy; nor, that, since this term has lost, in a great measure, its popularity, we should hear so much less of the influence of that disease on the health and lives of mankind. But have these affections, "quæ adeo diffusæ atque ad tam varia et multiplicia symptomata extenduntur," really *disappeared*, or have they only *changed their name?*

Sauvages observes, "morbus hic ante decimum sextum sæculum, vix erat cognitus, et intra duo ultima sæcula centum fere tractatus de eo sunt scripti, nullus vero *antea*," and it might be added, vix ullus *postea*. These are surely remarkable facts, and deserve, both on the part of the physician, and of the student of political economy, the most serious investigation. A disease appears in the beginning of the sixteenth century, continues its ravages for a time, and is scarcely known at the end of the eighteenth! It may be remarked, however, that the memory of the vulgar appears rather more retentive of past impressions, and that, with them, we still occasionally hear of the scorbutic humour and of the scurvy.

As a counterbalance to the disappearance of scorbutus, I would, however, notice, that medical inquiry has brought to light several new forms of morbid affections, as very prevalent now, although unnoticed or undistinguished formerly. These are the multitudinous effects of disorders of the digestive organs,‡ pseudo-syphilis, cachexia syphiloidea,§ and the different genera of the now well-defined cutaneous diseases.

I would here suggest it as a question, whether there be not sufficient evidence that these affections were formerly ranked and treated under the denomination of Scorbutus or scurvy? Some denomination they must have received, unless we suppose that, as scorbutus is unknown to us now, so these affec-

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* See Bateman, loc. citat.

† See the Elements of Medical Logic, Section VI.

‡ See the works of Mr Abernethy.

§ See the works of Mr Pearson.

tions had no existence formerly. And is there not reason to believe, that, not only the temporary loss of an invaluable remedy, * but also the great obscurity which envelopes this subject, is to be ascribed to the misuse of terms, and the ambiguity of medical language?

In a medical essay † published in 1818, I noticed a morbid affection, under the appellation of Mimosis Acuta, as one which appeared to me "not to have been fully described in medical writings," but which is extremely frequent and prevalent in the manufacturing district in which I reside, from the extensive influence of its usual causes, sedentariness and confinement. Some time after the publication of this little work, I was struck with surprise, on perusing the account of scorbutus by Willis, at the extraordinary similarity of the two delineations. And on pursuing the comparison, I became inclined to think that the two affections were in reality one and the same.

That the reader may judge for himself, I shall here, before I proceed further, present him with the two descriptions in opposite columns, beginning with the general character of Scorbutus, and of the Mimosis Acuta, and then proceeding to the comparison of the more ample description of these affections.

General Character.

Scorbutus.	*Mimosis Acuta.*
Maxima symptomatum farrago, affectus multiplices et diversi generis, quique interdum sunt naturæ oppositæ aut contrariæ, scorbuto accensentur, &c. Cap. 1.	From the great diversity and complication of the symptoms of this affection in different instances, and from the occasional prevalence of one particular symptom over the rest, it is probable that it has in practice been mistaken for some other affections. Chap. 1. p. 5. § 6.

Description.

Cephalalgiæ immanes et habituales, illæque aut vagæ aut periodicæ, modo spirituum torpor et somnolentia, modo vigiliæ pertinaces; crebræ vertigines, ac scotomiæ, convulsiones, paralysis.	The patient experiences headach and vertigo, and he is nervous and easily agitated. There is sometimes heaviness for sleep, sometimes great wakefulness and restlessness. p. 8. § 15; see further § 82, and § 92.
Sputatio copiosa, gingivarum ulcera, dentium vacillatio, oris fœtor.	The tongue is often loaded, swollen, and œdematous, marked by pressure against the teeth, &c.; the gums are red and swollen; the teeth and the mouth in general foul, and the breath loaded and fœtid. See also § 24, l. 7, § 33, l. 17.

* See Sir Gilbert Blane's Elements of Medical Logic, loco jam citato.

† An Essay on the Mimoses.

Circa pectoris regionem, dolores in variis membranarum partibus, &c. frequens asthma, respiratio difficilis et inæqualis, pectoris constrictio et angustia; tussis inanis.

Pulsus inordinatus, cordis tremor, crebra spirituum deliquia, frequens lipothymia ejusque fere metus continuus.

Paroxysms of oppressive dyspnœa, cough, viscid expectoration. §§ 18, 69, 72.

There is almost universally a peculiar sense of fluttering about the heart and pit of the stomach, § 15; palpitation of the heart, frequency and irregularity of the pulse, § 13. See also §§ 9, 28, l. 13, 29, l. 9, &c.

In ventre inferiori, hic morbus, quasi principem sedem figens, malorum filiola producit;—nausea, vomitus, rugitus, cardialgia, hypochondriorum inflationes, et murmura, colica frequens, et dolores molestissimi huc illuc discurrentes, diarrhœa fere constans, interdum dysenteria aut tenesmus, atrophia, &c. interdum ascites.

Loathing or craving; a sense of load, distention, flatus, eructation, hiccough, and even vomiting. At first constipation, afterwards constipation alternately with diarrhœa, and sometimes the latter becomes permanent. The motions often accompanied with blood, and frequently tenesmus: §§ 16 and 17. See further, §§ 14, 15, l. 7, 8; 77-80, &c.

Urina sæpissime rubicunda et lixivialis, cum crusta innatante, aut vitri parietibus affixa; interdum vero pallida, et aquosa, copiose excernitur.

The urine is extremely loaded at the commencement, but may become transparent during its continuance. It is often high-coloured, and liable to change, § 17.

See §§ 17, 103.

In externis membris, immo in toto habitu corporis, dolores vagi et non raro summe atroces, et noctu potissimum sentiuntur.

Lassitudo spontanea, carnium intabescentia, lumbago, aliorumque artuum debilitas et enervatio.

Weakness, tremor, &c. § 9. Loss of flesh, § 14; § 92, &c.

In cute maculæ varii coloris, tumores, tubercula, et, non raro, ulcera cacoëthea erumpunt.

Furunculi, purpura, erythema nodosum, &c. § 24.

Febres erraticæ.

§§ 27, l. 4, 28, l, 4, &c.

Hæmorrhagiæ graves.

Hæmatemesis and melæna; §§ 17, 99.

Modo plura modo pauciora (horum symptomatum) eaque interdum hujus, quandoque istius generis ac moris, laborantes infestunt, nonnunquam alia inassueta et prodigiosa.

§§ 1, 6, 19, 38, 39, &c. &c.

There is also a remarkable coincidence in the subjects of the two volumes. The work of Willis contains an account of hysterio, hypochondriasis, asthma, and other affections termed spasmodic; the Essay on the Mimoses contains these same subjects, subjoined to the account of the Mimoses Acuta. Willis observes, "affectus convulsive et scorbutici, juxta positi, se mutuo illustrabunt, ac utrique alterutris facem non levem præferent."

The reader may further compare the third, fourth, and se-

venth chapter of the treatise of Willis with Section II. and III. of the Essay on the Mimoses; and the indexes of Cap. III. and IV. with the list published in the latter work, § 17, page 10. I have not thought it proper to pursue this comparison beyond the description and enumeration of symptoms.

On further comparing §§ 18, 24, 104, &c. of my essay with the works of Abernethy, Pearson, and Willan, of Bateman, Philips, and Hennen,* with what I have observed since the date of my publication, and with the different accounts of scorbutus, as the term was long accepted, I am the more induced to think that the difference has consisted more in the difference of names than of the subjects treated of. On a perusal and comparison of these different works, we shall be less surprised that a medical author should speak of "scorbutic consumptions, scorbutic pox, scorbutic dropsies, fevers, palsies, gouts, convulsions, asthmas," &c. Chlorosis, hypochondriasis, and the atrabiliary and arthritic affections, are each deemed scorbutic by Morton, Riverius, and the editor of Sauvages. Maynwaringe describes scorbutus as being "polymorphous," and "polyrhizous." In my little essay I have ventured to propose the term "Mimosis." Dr Wilson uses the epithet "mimic" in a paper on *Dyspeptic* PHTHISIS; † and I would further refer to the works of Hamilton, Abernethy, Ayre, &c. for the description of a multiform and irritating morbid affection.

From all that I have said, I should certainly hesitate in concluding that the disease termed Scorbutus by Willis is "now entirely extinct;" and I would again propose the question, whether it has not rather only changed its name?

We are thus prevented from rejoicing at the disappearance of a source of great suffering and mortality. But we are enabled to account for the frequent appearance of scorbutus in the sixteenth and seventeenth centuries; and we are freed from the pain of supposing that there is a new host of enemies under more modern appellations. We are satisfied that there may occur a variety of mimic and of cachectic affections in the eighteenth and nineteenth centuries, without supposing the disappearance of former, and appearance of later forms of disease. It is plain that we do still witness the "pulmonum tabes et totius corporis fæda et miserabilis corruptio;" and may we not hope that this is, in reality, no new disease? From this affection the true sea-scurvy, the purpura, and the different

* Ed. Med. Journ. Vol. XIV. p. 204.
† Medico-Chirurgical Transactions.

genera of cutaneous diseases, are, of course, totally distinct. They all probably exist now nearly as they existed formerly.

It is also probable that these affections were not unknown *before* the sixteenth century. It is apparently noticed by ancient authors under the denomination of Cachexia. Celsus describes the appearances thus: "Corporis malus habitus est; ideoque omnia alimenta corrumpuntur. Quod vere fit, cum longo morbo vitiata corpora, etiamsi illo vacant, refectionem tamen non accipiunt; aut cum malis medicamentis corpus affectum est; aut, cum inusitatos et inutiles cibos aliquis assumpsit, aliquidve simile incidit. Hinc præter tabem, illud quoque nonnunquam accidere solet, ut per assiduas pustulas, aut ulcera, summa cutis exasperetur, vel aliquæ corporis partes intumescant." * This description certainly coincides in many points with that of scorbutus penned by Willis. But it would be foreign to my present object to pursue this point further.

I will conclude these remarks by reminding the reader of the immense importance, in medical practice and medical study, of the Diagnosis of diseases. Indeed, the future progress of our science and art would appear to depend very much on the pains bestowed in uniting a rectified nomenclature with the due and strict identification of diseases and appropriation of remedies.

Nottingham, November 5th 1819.

V.

Case of Hydrophobia originating without any obvious Cause. By George Ballingall, M.D. late Surgeon to his Majesty's 33d Regiment, and Surgeon Extraordinary to his late Royal Highness the Duke of Kent.

Dear Sir,—An abridged statement of the following case having been lately published in Dr Coleman's Thesis, I am anxious to have an opportunity, through the medium of your Journal, of stating the case more at large, and of mentioning some additional particulars which support the idea of its being a genuine and spontaneous instance of hydrophobia.

This was the last of six cases of hydrophobia which occurred

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* Lib. III. Cap. 22.

in the Second Battalion of the Royals during my service with it in India. All of these were seen by Mr Davidson, Surgeon of the regiment, and four of them by myself. Mr Paterson of the 25th Dragoons, who was called into consultation, had also (to the best of my recollection) previously seen cases of the disease; it will, therefore, I think, scarcely be contended that we were deceived as to its nature.

In addition to the circumstances stated in the detail of the case as proofs of its spontaneous origin, I may mention, that a native girl, who had lived with the patient for many years, was particularly questioned as to his having received any bite or other injury, but could remember nothing likely to have given origin to the disease.

The hospital attendants having seen us employed in inspecting the surface of the body, concluded that this was all the examination we wished to make, and proceeded to bury it, which prevented the dissection; a circumstance I very much regret, although, in my previous dissection of hydrophobic patients, the morbid appearances have been so scanty and ill-defined as to render it doubtful whether, in this instance, dissection would have thrown any additional light upon the subject.

If I am not extending this communication to an unreasonable length, I would beg leave to take this opportunity of stating the following circumstances as illustrating the beneficial effects of early excision in cases of the bite of a rabid animal. On the morning of the 8th of February 1810, when quartered at Hydrabad, four men were brought to me who had all been bitten by the same mad dog in the course of the preceding night, two of them about 11, P. M., the others towards 4 in the morning, about two hours previous to my seeing them. The bitten parts in all of them were immediately removed, and caustic applied to the wounds. In about a month afterwards symptoms of hydrophobia appeared, and speedily proved fatal to the two first bitten, while the others, in whom the virus could not have remained more than two hours, were never affected with any symptom of the disease.

GEORGE BALLINGALL.

Howe Street, 25th August 1819.

6, P. M.—Private JOHN VERBLANKER, æt. 54, a native of Flanders, twenty-eight years resident in India, a man of a spare habit and sallow complexion, was first reported sick this morning, at which time he complained of nothing but a slight uneasiness about the pit of his stomach, and also at the top of the sternum, attended with a slight degree of nausea, and loathing of

food; for this he was ordered a dose of rhubarb, which has produced two stools. He complains at present of urgent thirst, but shews the utmost horror at the approach of water, and is affected with violent spasms of the muscles of the throat whenever it is brought near him; shows also an aversion to light, and an extreme sensibility to the accession of cold air. The uneasy sensation at the top of the sternum is much increased, and he discharges a great quantity of ropy phlegm by the mouth. On inspecting the fauces, a slight degree of preternatural redness is the only thing remarkable. Pulse quick and small; heat natural.

Affusio frigid. statim. Cap. opii pur. gr. x. et applic. vesicatorium sterno.

8, P. M.—Six large pots of cold water were poured over him, which he bore with much resolution, but did not seem at all relieved by it. Blister has been applied to the sternum, and ten grains of opium administered. He has also, with great exertion, drunk about half a pint of wine, and a small quantity of arrack; when urged to take more, he expressed an apprehension that we wished to make him drunk, and objected to renew his efforts.

The patient was at this hour visited by Mr Paterson of the 25th Light Dragoons, who recommended the injection of two or three purgative clysters, to ascertain that his bowels were thoroughly emptied, and then the exhibition of opium in the form of injection. Two purgative injections were accordingly thrown up, and returned without any appearance of feces. The patient was immersed for about twelve minutes in a tub of warm water, from which he expressed relief; and on coming out took ten grains more of opium, and had an injection containing ½ oz. R. opii.

21st. 5, A. M.—Has slept none, and has been extremely restless during the night. He now appears much exhausted, but is perfectly collected in his mind, and evinces great resolution; pulse very small; skin cold and moist; blister slipped off during the night, and was not replaced. Expresses a wish to be again put into the warm bath, which, he says, is the only thing from which he has experienced any relief; wishes also for an emetic to assist in removing the phlegm, of which there is still a profuse discharge from the mouth. A strong solution of tartar emetic was prepared, of which he took one dose, a warm bath was also ordered, but while it was preparing the patient sunk and expired.

The most singular circumstance attending this case was, that neither the patient himself nor any of his comrades could recollect his ever having been bit, or sustained any injury whatever likely to have produced the disease. His extremities were minutely examined, but no scar was perceptible.

I regret that circumstances occurred to prevent my making an inspection of the body after death, as it would have been highly satisfactory to have seen whether the appearances in the gullet and stomach corresponded with those I have observed in other cases of hydrophobia.

The advanced age of this patient would probably have prevented the trial of blood-letting, even if we had been inclined to adopt it; but five instances of the failure of this practice (besides that of Serjeant Clarke *) having now come to my knowledge, I have just as little confidence in blood-letting as in every other remedy recommended for this horrid disease.

Bangalore, April 20, 1813.

VI.

Account of a Case of Fracture of the Neck of the Femur, in which a Bony Reunion had taken place within the Capsular Ligament. By Robert Liston, Surgeon, and Lecturer on Anatomy and Surgery, Edinburgh. *(With an Engraving.)*

Although the greater number of French surgeons have, for many years, considered the union of a fracture of the neck of the femur, within the capsular ligament, as by no means rare, and generally to be accomplished by proper treatment,—still most surgeons in this country have maintained a contrary opinion, and have doubted the accuracy of these observations.

On that account, the dissection of a case of fractured femur within the capsular ligament, where a complete bony union had taken place, may not be deemed unworthy of a place in your Journal.

This opposition of opinion between the surgeons of the two countries, has been owing in a great measure to the difference

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* See Edinburgh Medical and Surgical Journal, No. XLI. p. 74.

of treatment they have employed. British surgeons, being contented with tying the patient's knees together, bending the thigh upon the pelvis, and the leg on the thigh; and even if splints be applied, they are commonly short, and ill-calculated to prevent any displacement or motion betwixt the fractured extremities. By such treatment, the broken ends of the bone may, in the first instance, be put in correct apposition, but very soon the shaft of the bone is pulled upwards, the limb shortened, and the toes turned outwards. The next day, the surgeon replaces them,—again they are displaced,—and this happens day after day, so that no bony union is allowed to take place, and the patient is left to drag about a useless limb for the remainder of his life.

The greater number of the surgeons of this country are so thoroughly convinced that it is impossible for union of a fracture of this description to take place, that not even an attempt is made, in many cases, to assist the natural process, and many instances there are of persons who have had the misfortune to meet with this dreadful accident, and who have been told, that nothing could be done for their relief, and that they must necessarily remain lame for the remainder of their lives.

It is not, then, to be wondered at, that so many preparations of fracture of the neck of the femur, within the capsular ligament, are to be met with in the museums of this country, in which the fractured extremities are smooth, covered with a cartilaginous-looking substance, and forming part of the cavity of the original joint. Several such preparations I have at different times dissected and had in my possession. In M. Desault's surgical works by Bichât, after the different plans of treatment have been considered, and among the rest that of Foubert, which, though bad, is still better than that usually employed in this country, the following observation is made, which is quite to the point.

"La methode de Foubert ne fait elle pas presque ce que l'on opere dans ces experiences, ou dans une fracture faite expres sur un animal? On agite souvent les fragmens, pour empêcher leur reunion, et produire une articulation artificielle." Tom. I. p. 231.

I believe, if proper means were taken to keep the parts steady, and in apposition during the time required for their consolidation, such preparations as the one I shall describe would soon become very common, and we should not have so many lame and helpless objects from this cause.

I should think that the permanent extension, as employed by Desault, or, what is perhaps better, as produced by the long

splint which is used at St George's Hospital in fracture of the thigh, is the best means of favouring the union, by keeping the limb steady.

The splint I allude to is made of thin board, hollowed out to the shape of the limb, and reaches from the toes to the short ribs. The whole apparatus being firmly attached to the limb by a roller begun at the toes and carried upwards to the groin; a bandage passed under the perinæum, and through an opening in the top of the splint, when tightened of course extends the limb as much as required. It is also furnished with a foot-piece on the outside, which prevents the toes from turning outwards. The short splint is not required on the inner side of the thigh, as in fracture of the body of the bone. This splint is very useful in all fractures of the upper third of the femur; but I believe that by attention, those of the lower third and middle of the bone can be equally well treated, by placing the limb on the side with the knee and thigh bent, and by the use of the paste-board splints, at the same time directing the position of the toes.

The following instance of union of the fractured neck of the femur occurred to me some time ago in dissecting a body, the previous history of which was unknown.

The limb was shortened fully two inches, and the toes turned outwards. On opening the capsular ligament, which was quite entire, the neck of the bone within it was found to have been fractured, and a perfect bony reunion to have taken place. There was, however, a considerable diminution of the length of the neck of the bone, partly from absorption, but chiefly from displacement, the body of the bone having been drawn upwards on the neck fully one inch.

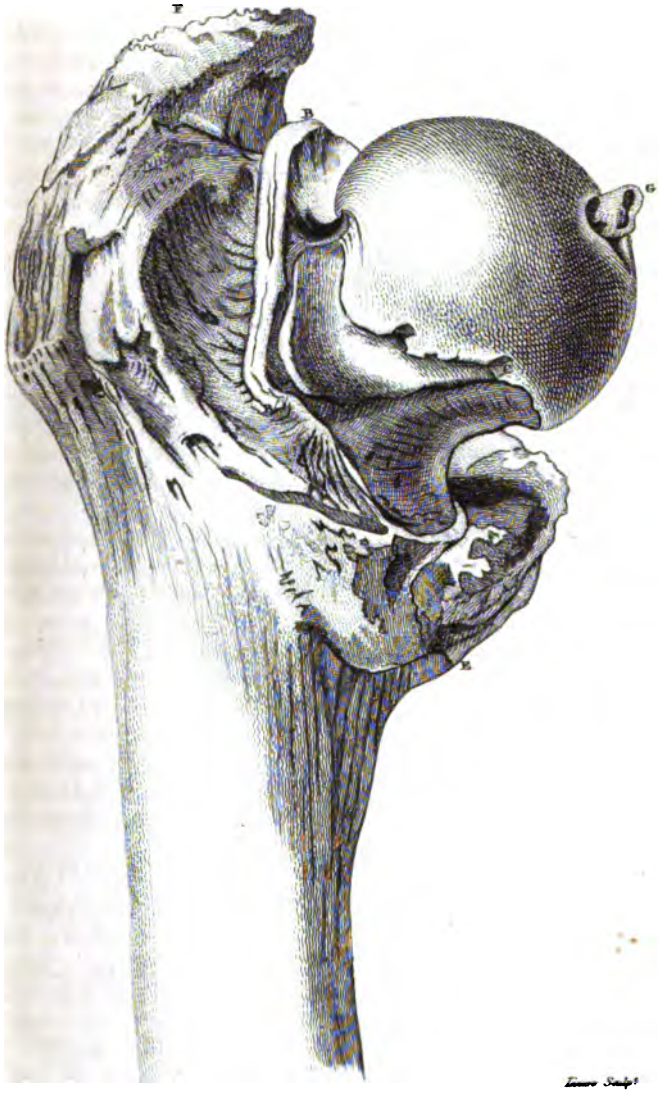
The particular appearances will be best understood by a reference to the annexed sketch. The bone itself is preserved in the Museum of the Royal College of Surgeons in London.

EXPLANATION OF THE SKETCH.

A. The original situation of the neck of the bone. It was covered with the capsular ligament, which adhered firmly to it, but has been partly removed to shew the surface more distinctly. It would appear that the ligament had been stretched across the fractured surface from its original attachment F, and had united with it so as to come nearer the position the neck of the bone had taken.

B.B. The capsular ligament, with the line of fracture imme-

Mr. LISTON'S CASE.



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diately within it. Both internally and externally there is considerable deposition of bone.

C. Another branch of the fracture, extending more towards the head of the bone.

D. A portion of the neck which is included betwixt two branches of the fracture.

E. A fissure separating a new process of bone from the trochanter minor.

F. The original attachment of the capsular ligament.

G. The round ligament, which, when recent, was extremely vascular.

Further Remarks on M'Nair's Case, from page 70.

I think it a duty I owe to the profession to give the ultimate result of M'Nair's case, published in the last number of this Journal. In my last report of him in that number I described the wound as cicatrizing rapidly, and stated that he returned home exactly three weeks from the date of the operation.

On the 1st of January I had a letter from Mr Gray of Kinross, a very excellent surgeon, who, after some remarks on the operation, &c. goes on to say, that "his general health seems to have improved somewhat since he returned to Kinross, and the wound, which was filled up with healthy granulations at that time, is now well advanced in cicatrization. However, for some days past the sore has put on rather an unhealthy appearance, and at the upper part of the wound, about an inch from the place where the subscapular artery had been tied, there has arisen a considerable fungous excrescence about the size of a walnut, of a darkish purple colour. This was only observed on Monday last, (December 27,) for the first time, of a bluish tint; next morning, however, about two o'clock, he awoke drenched in blood. I was a good deal alarmed, and went to his lodging as speedily as possible; but by the time I arrived the hæmorrhagy had stopped, and, on removing the dressings, found that the bleeding had arisen from the fungus, which had increased in the course of twenty-four hours from the size of a pea to that of a cherry. From examining the bedclothes I suppose he may have lost from lb. i. to lb. iss. Since that time there has been a slight oozing of blood, but this has not been to any extent. The fungus, however, is rather increasing in size, and there seems to be slight swelling above the wound. The portion of scapula that has been left is more prominent than the corresponding one on the opposite side, and

seems as if it were raised by some growth below it. This appearance, however, may be owing in part, at least, I conceive, to the division and removal of so many muscles in the operation. The fungous excrescence seems to be attached to, or rather projecting from under the cut edge of the scapula. He has little or no pain in the part; and the arm which was so much wasted before the operation has acquired the size of the other, but he has not recovered much more power in it since he returned to Kinross."

As I was naturally much interested in the case, I set off next day to Kinross. On my arrival I called on Mr Gray, and accompanied him to our patient's house. We examined the sore together, which corresponded in every respect with the preceding very accurate description. The projecting tumour, however, had attained the size of an apple, and by the sides of it on pressure a quantity of bloody serum issued. The rest of the sore was completely cicatrized. As I determined on having him removed to Edinburgh under my own immediate care, I was unwilling to examine the nature of the swelling very accurately in case of hæmorrhagy occurring. It was accordingly dressed up with a firm compress and bandage. We had just reached Mr Gray's house when a message was delivered that the bleeding had returned more violently than ever. On hastening to his assistance, we found his clothes wet with arterial blood, and on removing them, with the bandages, &c. quickly, perceived that it flowed from the sides of the dark-coloured tumour. Although this projecting mass had every appearance of an organized tumour, I had from the first doubts regarding it; and, on the idea that it was merely coagulum, (as it proved to be,) twisted off the projecting part, and with my fingers cleaned the cavity down to the bone. I then dilated the opening in the integuments with a probe-pointed bistoury, so as to assure myself, by actual inspection of the bone, that the blood proceeded from its substance. By the application of dossils of lint it was easily commanded, and the whole being secured by a firm bandage, he next day, without any accident, arrived in town.

I at this time proposed the removal of the diseased bone and arm; in this, however, I met with no encouragement from Mr Russell and the others consulted, who, though from different reasons, all agreed in this. On the removal of the dressings no bleeding occurred, and every thing looked so well, that I for some time flattered myself, that, by dressing from the bottom of the wound, and the application of escharotic or actual cautery to the diseased bone, a firm cicatrix might be obtained.

I applied the solution of the nitrate of mercury (the eau mercurielle of the old surgeons) by means of lint. Small fungi, at first like flabby granulations, gradually assuming a dark red colour, frequently appeared. If allowed to run their course, they burst with considerable hæmorrhagy, and ultimately the same phenomena might have occurred as at Kinross. I, however, at their first appearance, opened them, and stuffed the cavity to the bone (to which they uniformly led) with the caustic solution. In this way, during three weeks that he remained in Edinburgh, the hæmorrhagy was completely restrained. The wound, however, became filled with loose spongy granulations, and apparently from the enlargement and disease of the glenoid cavity, the head of the humerus was dislodged from it and dislocated forwards. This was attended with considerable pain and swelling of the top of the shoulder. Many of my professional friends, in whom I had confidence, visited the boy at my request; and as the disease appeared to be out of the reach of external applications, and, as the more severe of these seemed only to add to his suffering, without any ultimate prospect of benefit, I again proposed the removal of the remaining portion of the scapula and arm, with half of the clavicle. I represented the ease with which the subclavian might be tied by turning forward the scapula from the ribs, and that in this way the boy would lose but little blood. Some thought that the cautery ought to be tried, at the same time expressing their opinion that it could not check the disease. This plan I rejected as cruel; others thought that there was not enough of strength left to enable the patient to bear the operation. As I could get no one to second me in my opinion, I was very unwillingly obliged to give up all thoughts of operating, and sent the boy home. I was induced to do so the more, that at this time a severe cough and expectoration came on, with symptoms of hectic.

In answer to my inquiries, I have to-day (February 28th) received a letter from Mr Gray, part of which I take the liberty of quoting.—"I have delayed writing you concerning M'Nair, only in consequence of nothing very particular having occurred in his case since he returned to Kinross. There was, indeed, a very great discharge of thin matter from the sore, and also from an opening which formed on the top of the shoulder, which took place in a few days after he came home. This relieved considerably the hectic symptoms, and the cough, which was so very troublesome, has now entirely left him. There has been no hæmorrhagy from the wound, further than a slight oozing once or twice. The sore, however, has spread considerably, especially to-

wards the axilla, and there seems to be an immense collection of coagula, which are retained in the wound only by a thin layer of coagulable lymph. These give the sore a very ugly appearance, and the discharge from the loose and flabby granulations which intersect the coagula is very offensive. The head of the humerus can be felt lying on the fore part of the joint, and out of the glenoid cavity. There have been a number of small blisters, which have formed on the top of the shoulder, containing a whitish watery fluid, which break and leave a small sore, which, however, soon heals, and this is succeeded by another, which runs the same course. Within the last few days he has complained of pain in the elbow-joint of the affected arm, which is a good deal swelled. He is now very much emaciated, and his appetite is falling off considerably."

It is now obvious, that no surgical operation can be attempted, from the state of the poor boy's health, as well as the probability of the disease having spread along the glands into the chest. I am only sorry that I did not, when he was in town, even against the advice of those surgeons who saw him, make at least the attempt to save his life by the removal of the extremity.

Since the publication of the last number of this Journal, I have removed, amongst others, several tumours composed of cartilage, and containing cells filled with a glairy fluid. These tumours generally adhere to bones on which they commence, and which are frequently deprived of their earth, and rendered soft by pressure. * The circumstances of one only I shall relate, as in it a portion of the scapula was also removed.

The subject of this case, when a boy, fell from horseback, and pitched on the top of his right shoulder; some swelling supervened, on the subsidence of which a hard tumour was perceived over the acromion process. This continued stationary, though repeatedly inflamed from slight injuries till six months ago, when, in throwing back his arms to save himself in falling among slippery stones, the part was strained, and from that time it began to increase very rapidly, and extended in every direction, so as, in a great measure, to destroy the use of the arm.

I found the tumour covering the acromion, the articulation of that process with the clavicle, and a great portion of the spine of the scapula. From this attachment it stretched over the articulation of the humerus to the origin of the brachiæus. The

* I am not aware that any very accurate account has been given of this very intractable class of tumours.

projecting part measured 18 inches in circumference. The skin was discoloured over the whole surface, some points of which were prominent and soft, but the greater part of the mass was exceedingly hard. The tumour admitted of no motion, but by fixing it the humerus could, though to a very slight extent, be carried in different directions independently of it. From this circumstance I thought it probable that the disease did not extend into the joint, and was induced, in consultation, to propose at least, by an attempt to remove the tumour, to save the arm. This was agreed to, though, from the slight hopes some of the surgeons entertained of its being possible to accomplish the object, the patient was made aware that it might be necessary to remove the extremity also. With the greatest firmness the gentleman immediately agreed to submit to the operation, even on these terms, which I accordingly performed, with the assistance of my friend Mr Nasmyth, and in presence of Mr Russell.

On dividing the integuments the fibres of the deltoid presented themselves covering the swelling; these were cut through on both sides, and the upper part of the humerus and capsular ligament dissected clean. I then found, that, by removing a portion of the scapula, the arm might be saved. The bursa betwixt the acromion and ligament was cut open, the articulation of the clavicle separated, and the acromion sawn off by its root, along with half of the spine. Several portions of the scapula were then removed with the knife, to which they readily yielded, being quite cartilaginous. Little of the integuments could be saved on account of their diseased and adherent state, of course a considerable surface, with the capsular ligament, was left exposed. The ligament and bone granulated as speedily as the rest of the sore, and the whole is cicatrizing rapidly. The tumour was composed of cartilage and firm fibrous or ligamentous substance, containing pretty large cells, which extended even to the integuments, and were marked out by the soft, red, and prominent points on the surface; these contained a glairy yellowish fluid. A cavity corresponding to the convexity of the humerus formed a complete cap or covering to the joint. The surface of the capsular ligament was connected to this cavity by very delicate and thin cellular substance. Even though the ligament had been found adhering firmly to the substance of the tumour, and on this account it had been necessary to open and remove a portion from it, I should have been inclined to have left the arm, trusting to nature for some attempt at its regeneration. Though the joint in this way had been disabled, still the fore-arm would have been very useful in writing, &c. which, to a man of business, was of great consequence.

My friend Dr Kennedy, physician in this city, who served long as a surgeon in India, assures me that he has seen the capsule of the shoulder laid open extensively by sabre blows, and wounded also by musket balls, without the loss of the extremity, or even much diminution of its power or motions.

56, *George Street, Edinburgh,*
February 29, 1820.

VII.

Dissection of Two Cases of Club-Foot. By THOMAS M'KEEVER, M. D. one of the Assistants to the Dublin Lying-in-Hospital.

AUTHORS have differed much with regard to the exact structure of the parts concerned in the deformity termed club-foot. Their varied and discordant accounts of those cases where an opportunity was afforded of examining the parts by means of actual dissection, I conceive to have arisen from two causes. In the first place, the deformity, in all probability, differs considerably in different individuals; and, in the second place, those dissections have been made at different periods of life, when, of course, the parts must have been more or less modified, according to the greater or lesser degrees of pressure to which they may have been subjected. It has, perhaps, been owing to the latter cause that the two latest and most distinguished writers on the subject, namely, the celebrated Scarpa, and Professor Collis of this city, should have differed so materially in their views of the original condition of the parts; the former conceiving the deformity to be altogether occasioned by the bones being turned on their short axis; while the latter, in an extremely interesting and important essay, to be found in the first volume of the Dublin Hospital Reports, maintains the existence of considerable deviation from the natural structure.

Early but ineffectual efforts to remove the deformity may also have contributed to render the history of many of those cases complex and unsatisfactory.

Having lately had an opportunity of examining two cases which occurred in the Lying-in-Hospital of this city, where the parts were never subjected to the slightest pressure, and where, of course, the most satisfactory opportunity was afforded of as-

certaining their real and original condition, an account of them, in the absence of more important information, may perhaps prove interesting to the profession.

The foot was thrown with the external edge downwards, the internal inclining upwards and somewhat inwards; the dorsum, which was convex in the longitudinal direction, looking directly forwards. The sole was quite flat, both transversely and longitudinally, and was marked by a deep ruga, which ran completely across; to this another just under the inner ankle passed at right angles. The heel wanted its natural degree of projection, while on the dorsum of the foot, at its most convex part, two considerable prominences were observed. The toes were not separated more than in ordinary, nor was the leg at all deficient in natural fulness.

On removing the integuments, nothing deserving of notice presented itself in the muscular parts. They were as well developed as in ordinary cases, nor did the tendons appear to bear a greater than usual proportion to the body of the muscle. The patella was not in a line with the outer ancle, as was observed in Mr Collis's cases; indeed, there was nothing either in the general form of the limb, or internal arrangement of its parts, that in the smallest degree differed from the usual structure.

It is curious, that the parts which I conceive would have formed the base of sustentation, had the child lived, were covered with that peculiar kind of fat which is found in such abundance under the integuments of the sole of the foot. The two prominences on the dorsum of the foot, already alluded to, were next examined, and were found to be occasioned by the projecting of the navicular head of the astragalus, and by the os calcis, where it joins the cuboid bone. Corresponding to these points on the sole, there was a large mass of fat, which, when removed, left a deep and sharp angular hollow, formed between the two rows of tarsal bones. The back part of the os calcis leaned against the posterior part of the extremity of the fibula, while the lower extremity of the tibia rested on the os naviculare. At each of these places, there was some appearance of an articulation, the opposed surfaces being smooth, though not so much so as in an ordinary joint. The internal cuneiform and navicular bones were attached by means of strong ligamentary bands to the inner ancle. I was now proceeding to examine what share each individual bone had in producing the deformity, and for this purpose divided the ligamentary bands just spoken of, when I was much surprised to find that I could, with the greatest facility, reduce the foot into its natural shape, the ligaments which opposed this direction being both weak and

loose. In the individual bones of the tarsus, little or no peculiarity could be observed; the neck of the astragalus was somewhat longer than usual, but there was no twisting of the neck of that bone, as observed by Dr Collis, nor was there any marked line between the intra-articular portion of the navicular head of the astragalus and that part which lay without the articulation; the latter, however, appeared of a more vascular and spongy texture. I examined the ancle joint with a good deal of care, but could discover nothing very peculiar in its formation; the surfaces had a slight inclination inwards, which of course favoured the twisted form of the foot.

Had either of these subjects lived, the parts which would have formed the basis of support, when the foot was applied to the ground, would have been the external surface of the os calcis, the cuboid, the little toe, and, perhaps, the one next it, with their metatarsal bones.

Before concluding, it may be worth mentioning, that in both cases the deformity was combined with spina bifida of very considerable extent. In the first, the tumour, which was of a bluish livid colour, extended from the last dorsal vertebra to near the point of the coccyx. The spinal marrow was observed to degenerate into a substance of a brownish yellow colour, and of very soft consistence, and then spread out in a lash of nerves on the interior of the sac. The anterior crural and sciatic nerves were found as large and as firm as in ordinary cases, and preserved this structure until their arrival at the sides of the vertebra, when they degenerated into the soft pulpy substance already spoken of. *Dublin, Nov.* 2, 1819.

It is somewhat singular, that, since the date of the above communication, another instance has occurred in the Lying-in-Hospital of this city, of a similar combination of deformities. The child having lived but a few days, I had an opportunity of examining the parts, and as the dissection was made with a good deal of care, I shall feel obliged by your embodying the remarks I have now to make in the paper already in your possession.

The formation of the feet differed but little from the cases already communicated, the spina bifida, however, was examined with much more minuteness, and it is to the latter subject that I wish at present particularly to direct your attention.

On making an incision into the sac, a turbid fluid, of a brownish yellow colour and of thin consistence, escaped; in quantity it did not exceed a table spoonful. I propose examining this fluid the first leisure moment I can command, and shall send you an analysis of it at some future period, as I am not aware that its chemical composition has yet been ascertained.

The spinal marrow was found to terminate at the 11th dorsal vertebra, in a brownish vascular knob, from the extremity of which there came off two delicate nervous twigs of about an inch in length, there ending in a ganglion of a yellowish brown colour, which ran along the posterior wall of the sac, giving off on either side the lumbar nerves, as also those of the inferior extremity. The anterior crural nerve was examined with a good deal of care. Its distribution on the inferior extremity, as also its size and consistence, were found to be the same as in ordinary cases: after arriving, however, at the aperture for its transmission in the sides of the vertebra, it suddenly degenerated into a brownish pulpy substance, similar to the ganglion already mentioned, appearing to lose altogether its medullary character. After perforating, in the manner usual with all nerves, the dura-matral covering, it traversed the turbid fluid contained in the sac, and terminated by subdividing into a minute plexus of nerves, which was ultimately lost in the ganglion that passed along the posterior parietes of the tumour. *

Dublin, Nov. 25, 1819.

VIII.

Case of Infantile Resuscitation. By Mr William Tomkins.

July 25, 1819.—I was requested to attend Cathrine Delany, as her accoucheur. I went immediately, and found the os uteri dilated to the size of a half crown, the membranes were not broken, and, therefore, I could not correctly ascertain what part presented, but supposed it to be the hip. In three hours the waters came away, and the left knee protruded from the external parts. The breech was delivered in about a minute. On feeling the cord, I found its pulsation completely stopped. The face of the fœtus lay towards the abdomen of the mother, so that I was obliged to turn it into the hollow of the sacrum. The child was a very large one, the fontanels ossified, and the

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* Should further dissections prove the general existence of this structure, might it not suggest the propriety, in those cases where the child survives to an adult period, of avoiding the puncture at the posterior part of the sac? A lighted candle held laterally might, perhaps, enable us to select that spot where no risk would be incurred of wounding any of the nervous twigs.

arms turned up to the head, in consequence of which, about three minutes and a half elapsed between the delivery of the breech and that of the head. It may be right to mention too, that the cord was twisted once round the neck, and once round the face above the nose. I felt the child move when examining a few minutes before the waters came away, and, therefore, knew it was alive at that time, but when born it was completely livid and much colder than natural; it did not respire, neither could I discover any, even the slightest action of the heart; indeed, no visible symptom of life remained.

I gave it some smart raps on the glutei muscles, immersed it in a pan of warm water, passed a female catheter down the larynx, and instantly began to inflate the lungs, alternately inflating and depressing the chest. Having proceeded in this way for half an hour without remission, I took it out of the warm water, and again struck it smartly on the buttocks and back; the nurse then rubbed it for some time with warm flannel, after which I placed my hand on the left side of the chest, to feel if there was any pulsation of the heart, but could distinguish none, nor do I believe that any action had as yet commenced.

The child being replaced in the warm water, I resumed my attempts to resuscitate as before, and after having persevered in all an hour and seven minutes from the birth, I perceived a slight effort or motion in the mouth, accompanied by a guggling noise. This encouraged me to continue my exertions, and in a few minutes the child gasped frequently, but with great difficulty; its heart soon began to beat, the inspirations became frequent, the pulsation at the navel-string was strong, and in three hours and a half from the birth, respiration was regularly and easily performed, the pulse at the wrist distinct, and the appearance of the child in every respect perfectly natural. It is right to mention, that I did not discontinue occasionally to inflate the lungs, for full three hours, though it was not constantly employed more than an hour and a half.

This case serves to shew, that the visible operations of vitality may be suspended much longer than is generally imagined, and is adduced with a view to stimulate accoucheurs to exert themselves on similar occasions, and not too hastily decide that life is extinct, because they cannot discover any of its evident actions.

Sutton Street, Southwark, September 25th, 1819.

PART II.

CRITICAL ANALYSIS.

I.

An Account of the Varioloid Epidemic which has lately prevailed in Edinburgh, and other parts of Scotland, with Observations on the Identity of Chicken-Pox with modified Small-Pox. In a Letter to Sir James M'Grigor, Director-General of the Army Medical Department, &c. By JOHN THOMSON, M.D., F.R.S.E., &c. Professor of Surgery to the Royal College of Surgeons, Regius Professor of Military Surgery in the University, and Consulting Physician to the Edinburgh New Town Dispensary. 8vo. pp. 322. Edinburgh, 1820.

THIS work has many claims on our attention, not merely on account of the distinguished character of its author, and the novelty and ingenuity of the views it contains, but also, because it is the most comprehensive and authentic record of the observations that have been made on the late epidemic small-pox in this country. The zeal and industry with which these observations have been prosecuted, and the candour with which several of the conclusions resulting from them have been admitted, even when at variance with preconceived opinions, have been highly creditable to the practitioners in this part of the country; and, if they have not disclosed facts hitherto unknown, they have at least illustrated so fully the frequency of occurrences hitherto considered as anomalous, that they may fairly be said to have added considerably to our knowledge of the disease.

Two years ago, when variolous eruptions in vaccinated persons were talked of, almost every practitioner was accustomed to ascribe them either to the contagion of chicken-pox, accidentally co-existing with that of small-pox, and mistaken for it, or to imperfect or spurious vaccination. At present, we believe, there is hardly a practitioner in Scotland who is surprised, and we rejoice to think, that there is no one who, in ordinary circumstances, need be alarmed, at meeting with cases of fever and eruption, certainly proceeding from the contagion of small-pox in persons regularly vaccinated. The occurrence of small-pox for the second time in the same person, which was doubted by some, and held to be quite marvellous by almost all, has been shewn by the accurate observations and learned researches of Dr Hennen, and by the more extended and laborious inquiries of Dr Thomson, to be, though a rare, by no means an anomalous event. The occasional occurrence of a milder febrile eruption, in one who had previously gone through small-pox, in consequence of re-exposure to the infection of that disease, that is, the existence of a modified small-pox after small-pox, which was some time since pointed out by Mr Bryce, to be a more common occurrence than has been generally imagined, has now been fully illustrated. The distinctive marks which have been thought by many sufficient to characterize chicken-pox, particularly the vesicular form and short duration of the eruption, have been found inapplicable to various cases that have occurred, even in constitutions altogether unprotected. And lastly, we have in this volume a physician and professor of the first eminence, coming forward to state, that the observation of this epidemic "has compelled him, most reluctantly, to abandon opinions" in regard to the essential distinction of chicken-pox and small-pox, "which he had entertained for 30 years, and which he had taught with increasing confidence for more than half that period."

We believe that it is with regard to this last opinion only, that there is now any difference of opinion among the practitioners of Edinburgh, and to this part of the subject, therefore, the present work is chiefly devoted. In regard to all the others, we have, in this part of the world, already made up our minds. Nevertheless, as the conclusions to which we have been led differ in some respects from the doctrines still maintained by high authority in England, it cannot be thought a work of supererogation to take a general review of the evidence which the work before us, and other late publications, as well as our own observation of the disease, furnish on these subjects.

We shall in the first place then, briefly recapitulate the most

material information that we possess, relative to the occurrence of modified small-pox in vaccinated persons, along with regular and unequivocal small-pox in the unvaccinated.

Dr Adams of Forfar, the first Scottish practitioner who has observed and carefully described any considerable number of facts of this kind, gives an account in the Appendix to the work before us, No. IV. of 150 cases of modified small-pox after vaccination, of which he obtained information in the town of Forfar and its neighbourhood in winter 1813-14.

Several cases occurred in the practice of the New Town Dispensary here, in October 1815, which were at that time mistaken for chicken-pox, accidentally co-existing with small-pox. *

In spring 1817, many cases occurred at Cupar in Fife, of which the first notice was given by Mr Grace, surgeon there, in a letter to Dr Duncan, senior. † This place was afterwards visited by Dr Dewar, who published an account of 54 cases of the modified small-pox, and contrasted it with the natural small-pox, prevailing at the time among the unvaccinated. ‡

In summer 1817, and winter 1817-18, the regular and modified small-pox were frequent at St Andrews and Dundee. Dr Mudie, of the former place, saw upwards of 70 cases, many of which were of the modified kind. § Dr Ramsay of Dundee appears to have seen many cases of the latter, but does not state the number; but from the circumstance of the alarm excited in that town having led to a meeting of the Governors of the Infirmary, and the appointment of a committee to investigate the failures of vaccination, it may be presumed, that the cases of modified small-pox there must have been numerous. ‖

Mr Black, surgeon at Newton Stewart, gives an account of 62 cases of modified small-pox which occurred at that place in the summer of 1817, in connection with regular small-pox in the unvaccinated. ¶

In winter 1817-18, Mr Thomson, surgeon at Alloa, saw above 100 cases of eruption, "which he judged to be either chicken-pox or small-pox very much modified, in that neighbourhood, which existed along with, and in some cases appear

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* Medical and Surgical Journal, Vol. XII. p. 247.

† Ibid. Vol. XIII. p. 405.

‡ Account of an Epidemic Small-pox prevailing at Cupar in Fife in spring 1817.

§ See his letter to Dr Thomson, p. 238.

‖ See Dr Ramsay's letter in Dr Monro's "Observations on the Different Kinds of Small-pox," &c. p. 150.

¶ Medical and Surgical Journal, Vol. XV. p. 42.

to have been distinctly traced to the infection of regular small-pox." *

In the year 1818, Dr Dewar saw many cases of regular and modified small pox at Kirkaldy and its neighbourhood, exactly similar to what he had seen the year before at Cupar, but the number of cases of modified small-pox appears from his statement to have been five or six times greater on this than on the former occasion. †

In spring and summer 1818, Mr Smith of Dunse (Berwickshire) states, that he saw "a multitude of cases of small-pox taking place in every possible shape after vaccination," which, however, appear from his farther statement to have been uniformly modified. ‡

Mr W. Gibson of New Lanark, in his excellent letter to Dr Thomson, states, that he had seen in that village, which is admirably well fitted for medical observations, 251 cases of modified small-pox in the year 1818, along with 57 of regular small-pox in the unvaccinated. §

Mr J. Gibson of Lanark states, that he had seen the disease, in the same year, in upwards of 200 persons who had previously passed through regular cow-pox; and he had information, besides, that upwards of 50 vaccinated individuals had passed through the disease in the village of Kirkfield. ‖

Mr Vessie of Lanark saw it at the same time in upwards of 60 persons, who had previously passed through regular cow-pox. ¶

Dr Henderson of Perth saw the same disease in 37 vaccinated persons in the year 1818, and succeeding winter. **

Mr Syme of Blairgowrie states, that in the year 1818 "there have been a great many cases of varioloid disease among us," and that "it attacked indiscriminately those who had been vaccinated, and those who had not; still, however, it was generally milder in the former case." ††

Mr Malloch of Kirriemuir, Forfarshire, states, that a case of modified small-pox after vaccination, in consequence of exposure to the infection of regular small-pox, occurred there in the winter 1818-19, after which "the disease spread in all directions." He does not specify the numbers affected, but says, that "among the unvaccinated the mortality was very great." ‡‡

The 14th volume of this Journal (p. 389) gives an account

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* Monro's Observations, &c. p. 200.
† Medical and Surgical Journal, Vol. XV. p. 375.
‡ Letter to Dr Monro, Observations, &c. p. 196.
§ Account of the Varioloid Epidemic, &c. p. 252.
‖ Ib. p. 259. ¶ Ib. p. 261. ** Ib. p. 264.
†† Ib. p. 274. ‡‡ Ib. p. 277.

of 16 cases of modified small-pox, clearly traced to the infection of regular small-pox, which had occurred in the practice of the New Town Dispensary here, prior to May 1818. Several cases of modified small-pox are also described in Dr Hennen's well known paper in the same volume, (p. 409.)

Dr Monro's work (p. 160, *et seq.*) gives an exceedingly circumstantial and satisfactory account of five cases, seen by himself, three of which were in his own family.* He had seen also several other cases.

Lastly, Dr Thomson states, in the beginning of the work before us, that since June 1818, he "has had occasion to attend to the appearances this varioloid epidemic has produced in 310 persons who had undergone the process of vaccination;" and in a subsequent part of the work he says, "330 cases of small-pox after vaccination have now come under my observation."† A part of these cases are included in the statements of Mr Gibson of New Lanark, and Dr Henderson of Perth, but a great majority of this very large number is additional to the foregoing enumeration.

In almost all the cases which have been put on record in Scotland, it appears that the children were not considered to have been previously vaccinated, unless at least one distinct and characteristic cicatrix remained on the arm. Thus, Mr Gibson states, in regard to the 251 vaccinated children affected at New Lanark, (the greatest number observed within so narrow limits,) "none were taken into consideration but those on whom distinct cicatrices were observable, accompanied often by the most satisfactory evidence from parents and professional men of proper vaccination." p. 255.

The facts which have been thus put on record in Scotland accord perfectly with what has been observed more partially in other parts of Europe. Thus, Mr Oswald, surgeon in the Isle of Mann, saw "many cases in the winter and spring of 1817, for the most part in persons who had undergone vaccination."‡ Mr Dawson of Liverpool has seen "a pustular eruption after vaccination in about three cases in every 200 he has vaccinated," and as he has vaccinated above 3500, he must have seen about 58 cases of this disease.§ Mr Christian of Liverpool has seen modified small-pox after vaccination in about one in 200.‖ Mr Dunning of Plymouth has seen many

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* The other five cases detailed by Dr Monro are included in the Report of the New Town Dispensary, and in the paper of Dr Hennen, just noticed.

† P. 202. ‡ Thomson, p. 286. § Monro, p. 200.

‖ Ib. p. 204.

cases after vaccination exactly corresponding to those observed in Edinburgh, described them 13 years ago, and gave them the name of modified small-pox. * Dr Bent has described an epidemic at Derby in the year 1818, exactly resembling that observed so generally in Scotland. †

In 1817, M. Pougens, physician at Mittau in the south of France, published a pamphlet, entitled "Petite verole, chez plus de deux cents Individus Vaccinès observée au Mittau," and proved that the complaint in these persons was small-pox, by inoculating with the matter of the eruptions, and producing regular small-pox. ‡

It appears from a treatise by MM. Berard and Lavit of Montpellier, referred to by Dr Thomson, that an epidemic prevailed at Montpellier in 1816, which presented so exactly the same appearances with those he has observed here, as to have suggested to these gentlemen the same conclusions which he has attempted in this volume to establish. A "similar idea has nearly at the same time been advanced in Sweden," probably founded on similar facts. § Dr Verdeil of Lausanne, speaking of small-pox prevailing in Switzerland during the years 1817-18, says, in a letter to his son: "Il est arrivè que les enfans qui avoient eu une vaccine preservative, puisque l'endroit de l'insertion avoit tous les caracteres d'une vaccine regulière, ont cependant pris, durant cette epidemie varioleuse, des eruptions plus ou moins abondantes, qui avoient assez les apparences de la veritable petite verole, sans presenter, cependant, cette regularité de marche, qui lui est particulière." ‖ And we were lately informed by a very respectable and intelligent practitioner of Geneva, that he had seen, within the last few years, above 30 cases of modified small-pox (which he thought he could distinguish from chicken-pox, and traced to the contagion of regular small-pox) in that city. There is, therefore, nothing anomalous in what has been observed in Scotland.

We do not suppose that any of our readers can think it necessary for us to enter into detailed statements, in order to shew that the mild disease, described by all those observers in vaccinated persons, proceeded from, and gave rise to, regular small-pox in the unvaccinated. We admit, that if there exist, as we are still inclined to think there does, a real and essential distinction between the chicken-pox and small-pox, a small part

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* Medical and Surgical Journal, Vol. XV. p. 378.
† London Medical and Physical Journal, Vol. XL. p. 461.
‡ Thomson, p. 107. § Ib. p. 14.
‖ Monro, p. 197.

of the cases seen by Dr Thomson, and, perhaps, by some others of the authors just mentioned, in vaccinated persons, and even a few in unvaccinated, will fall to be referred to the head of chicken-pox. But, we believe there is no practitioner who has seen the epidemic, whether he believes in the independent existence of chicken-pox or not, who entertains *the smallest doubt*, that the disease under consideration, in a great majority of the cases which have occurred among the vaccinated, has been produced by the contagion of the true small-pox. It has, in every instance of the foregoing enumeration, existed along with regular small-pox in the unprotected; it has broken out, in many individual cases, at the precise periods when the contagion of that disease, according to the known laws of its diffusion, ought to take effect; it has corresponded in general very exactly to the description given by Dr Willan * and Mr Moore, † of the modified small-pox which they had seen in a few vaccinated persons, and which the former author in particular had produced by inoculating with the matter of cow-pock and small pox at the same time; it has been produced, in a few cases, by inoculating persons previously vaccinated with the matter of true small-pox; ‡ and conversely, inoculation with it has produced, in many cases, regular small-pox in the unvaccinated. §

Neither can we suppose it necessary to enter upon any details in order to prove that the disease which has occurred in unvaccinated persons, and has been called true small-pox, was really such. The *mortality of the disease* in these persons, which has amounted to one in four in the cases seen by Dr Thomson, and which is represented as very considerable in all the letters of his and Dr Monro's correspondents, must appear amply sufficient to determine this point; and Dr Thomson has expressly stated, that the epidemic has appeared to him "to have exhibited in its progress all the varieties of small-pox, from the mildest to the most malignant form of that disease described by practical authors." p. 29.

Indeed, we should not have thought it necessary to advert to this part of the subject at all, had it not been for the following

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* On Vaccine Inoculation, p. 50.

† History and Practice of Vaccination, p. 67.

‡ See Dr Adam's second letter to Mr Bryce, at p. 54 of Dr Thomson's Appendix; and Mr Oswald's letter to Dr Hannay, at p. 286 of his work.

§ See particularly Dr Monro's work, chapter 6. "Of the Effects of Inoculating the contents of the pustules of those who have had the Small-Pox after the Cow-Pox," where Dr Hennen's cases and various others are detailed.

passage in the Report of the National Vaccine Establishment, of the 8th April 1819.

"In several parts of the united kingdom, particularly near Edinburgh, *an anomalous disease, bearing some resemblance to small-pox*, has appeared in many persons. It has been described by several professional gentlemen of great eminence and experience. From their statement it appears, that this eruption attacked *indiscriminately* persons who had been previously vaccinated, who had had small-pox, or who had not gone through either disease."

As this statement, coming from so high authority, may prevent many medical men from acquiescing in the conclusions which appear to us to be fully justified by the observations made on this epidemic, and so retard the progress of useful information, we think it necessary to state, that in the foregoing short paragraph, there are two very important misapprehensions. *First*, Although Dr Thomson has given to the whole epidemic the title of Varioloid, and although Dr Hennen abstained from giving any name to the cases he has detailed, yet the disease is *so far from being an anomalous one*, that we are not aware of there being, among the great number of respectable practitioners who have seen the disease in Scotland, *any hesitation whatever* about giving the name of true small-pox to a very great majority of the cases to which we have now referred, occurring in persons not vaccinated. And, *secondly*, The disease has been very far from attacking *indiscriminately* those who had gone through vaccination, those who had gone through small-pox, or those who had gone through neither. In some instances, indeed, as at New Lanark, the number of vaccinated children who have been affected has been so great, that we must suppose the number to whom previous vaccination furnished complete protection against the contagion of small-pox to have been very small; and one of Dr Thomson's correspondents (Mr Syme of Blairgowrie) speaks of the contagion as affecting indiscriminately those who had been vaccinated, and those who had not. But, in general, we believe it will be found, that a small proportion only of vaccinated persons, exposed to the infection, took the disease, while few unprotected persons escaped it. Within the limits of our own observation, which has been pretty extensive, we are satisfied that several vaccinated children have been fully exposed to the infection of small-pox, for one who has taken the modified disease; and this perfectly agrees with what Dr Hennen has stated.

"One vaccinated child only, out of eighteen, caught any disease in the Castle from the inoculated children;"—and again,—"I have

witnessed the neutralizing powers of vaccination still more remarkably among the children of the lower class in the neighbourhood of the Castle, where, while the disease has raged violently among the non-vaccinated children, many instances have occurred of those who had undergone that process, having the complaint in the very mildest possible form, and many of their escaping it altogether; a fact exhibiting the result of a more rigid ordeal of the preventive powers of vaccination, than can be imagined by those who have not witnessed the incredibly crowded and confined apartments, in which these compact masses of human beings gasp for air, while, from the mutual friction of their bodies under the same scanty covering, the most intimate contact takes place between the sound and the diseased, and in many instances effects a complete and constantly renewed inoculation." *

As to the supposition, that the disease has attacked *indiscriminately* persons protected by previous small-pox, and persons wholly unprotected, it may be sufficient to answer, that Dr Thomson has only been able, with all his industry, to hear of seventy-one cases of any kind of febrile eruption in persons who had previously gone through small-pox, while the number in the two other classes seen by himself, and those with whom he has communicated on the subject, has certainly amounted to several thousands.

Having stated the grounds on which it has been concluded, that the epidemic we have lately witnessed has been true small-pox, and that it has produced, in a great many cases, a modified disease in vaccinated persons, we proceed to inquire to what we are to ascribe the imperfection of the security afforded by vaccination to so many persons.

To this the National Vaccine Establishment answer, that the partial failures are owing to *imperfect vaccination;* and they think it quite a sufficient explanation of what has been observed in Scotland, that in those cases in which the particulars of the vaccine process are given, "that process has not been conducted on the plan recommended by this Board, and which *experience has proved to be the most efficacious.*"

Now, although we entertain sincere respect for the members of the National Vaccine Establishment, and although we have no personal interest in the reputation of any one mode of conducting the vaccine process, yet, in reference to the sentence just quoted from the Report of the Vaccine Establishment, we shall take the liberty of reminding our readers of the excellent observation of Mr Moore, applicable to almost all medical evi-

* Med. and Surg. Journal, Vol. XIV. p. 457.

dence, that "few men, even those of considerable capacity, distinguish accurately between opinion and fact."

That the greater number of persons who have been affected with modified small-pox in Scotland, were not vaccinated precisely according to the plan recommended by the Board, we believe to be fact, (a great proportion of them having been vaccinated before that plan was promulgated;) but that experience has proved that plan to be the most efficacious, we humbly apprehend to be only matter of opinion. The only fact which we have seen stated in favour of that opinion is this, that in eleven years, 52,253 persons had been vaccinated by the Establishment, and that of these only four *are yet known* to have had the small-pox afterwards. Now, in order to entitle us to dignify the conclusion which has been deduced from this fact with the title of experience, we conceive that information on two other points is required. *First*, we must be informed what measures have been taken to ascertain whether or not any greater number of the persons vaccinated by the Establishment have had modified small-pox. For any thing we yet know to the contrary, great numbers of them may have had that disease without being reported to the Establishment. *Secondly*, we must be informed how many of them have been fully exposed to the contagion of a virulent epidemic small-pox. Three years ago, as strong negative evidence as is now adduced in favour of the plan of the Vaccine Establishment, might have been adduced in favour of the method generally adopted here; and, although we admit that the contagion of small-pox is probably in general more prevalent in London than in Edinburgh, yet it is very rarely absent from Edinburgh. It was when the disease appeared in a more virulent form than usual, and began to diffuse itself more generally than usual among the unvaccinated, and not till then, that it began to affect more frequently the vaccinated; and we have not yet sufficient experience to determine that the same thing may not happen among persons vaccinated by the Establishment.

At present we believe there are much fewer persons in any part of the kingdom who have been vaccinated precisely according to the rules of the Establishment, than who have been otherwise vaccinated; and, therefore, it is naturally to be expected that the modified small-pox should occur oftener in the latter class than in the former. When we shall have comparative statements of equal numbers of persons effectually vaccinated in both ways,—that is, so as to leave similar marks on their arms,—exposed to the contagion of small-pox during the same epidemic, we shall be able to judge whether the plan of the Establish-

ment really possess the superior efficacy attributed to it. But, in the mean time, it is quite obvious that the efficacy of any plan of vaccination must be estimated, not by the number of persons subjected to it who are *not known* to take small-pox after it, but by the number who *are known* to be fully exposed to the contagion and resist it.

As the conclusion drawn from the merely negative experience of the Establishment, therefore, does not appear to be fully warranted by the facts, we shall state the reasons which have induced the observers of the late epidemic in Scotland to entertain great doubts whether the imperfection of the security afforded can have been owing to imperfection in the vaccine process.

1. The only peculiarity of the process recommended by the Establishment is, that several vesicles are excited, and at least one vesicle is allowed to run its whole course without being opened. Now, of the comparatively small number in whom this process has been followed in Scotland, *it has not been observed* that they resisted the contagion more than those vaccinated in the more usual way, but in whom at least one equally characteristic cicatrix remained. Thus Dr Adam states, that of forty cases vaccinated by surgeons, who took the modified small-pox at Forfar, it was remembered distinctly that there were twelve, "from whose vesicles no lymph was abstracted, nor did the parts receive any injury from the clothes;" and of these twelve, five had two vesicles, each on the inoculated arm, left unopened. Besides this, he says, what, we believe, applies to a great many of the cases that have occurred in Scotland, besides those at Forfar, "many have had more than one vesicle, but it is not remembered whether one or all may have been opened," the attention of the practitioner having been directed only to the regular formation of the areola. *

In like manner, Dr Ramsay of Dundee, although he very properly recommended that the direction of the Establishment be in future complied with, says expressly, "Several of the most distinctly marked cases of small-pox have occurred in those who had been vaccinated, apparently in the most satisfactory manner, and where the cellulated marks on *both* arms are still as perfect as possible. In most cases, however, the pustules had not been preserved entire, but in several they were so; and in those, no circumstance whatever could be found on the strictest

* Thomson, App. p. 51.

examination to invalidate the evidence of small-pox in its perfect form having succeeded to vaccination in its perfect form." *

The practice which has been followed for many years at the Public Dispensary here, and for several years at the New-Town Dispensary, is to make two punctures on one arm, and to leave one vesicle unopened. Yet many of the children vaccinated in this way have taken modified small-pox.

2. While on the one hand, in such cases as these, vaccination which the Establishment would have called perfect, has given imperfect security, there have been on the other hand, a great many cases, in which vaccination which they would have called imperfect, has given perfect security. We have seldom seen a case of modified small-pox without having occasion to remark that several persons, vaccinated often by the same practitioners, and generally in the same manner, having marks on their arms precisely similar, and equally exposed to the contagion, have escaped entirely. And during the late alarm, a great many children of the higher ranks, at the solicitation of their parents, have been inoculated for the small-pox at different periods after the kind of vaccination commonly practised here, and no constitutional affection or general eruption been produced. One very satisfactory experiment of this kind, on seven children in one family, has been detailed by Mr W. Wood. † Several of Dr Gregory's children were inoculated with small-pox some years ago, at different periods after vaccination, and only a local effect produced; and there have been many other inoculations with the same result. Dr Thomson observes, on this part of the subject, "I know that, in many instances, *single vesicles which had been abraded* have appeared to preserve from infection individuals fully exposed to the contagion of small-pox, or subjected to the test by inoculation." p. 314.

As these considerations appear, in a great measure, to neutralize the general negative evidence which has been adduced in favour of the superior efficacy of the method recommended by the Establishment, we are naturally led to inquire farther, whether there are any reasons, *a priori*, or any facts known from the observation of other infectious diseases, either favourable or adverse to the supposition of the superiority of their method. With this view, Dr Thomson observes,

1*st*, That "vaccine vesicles, if left to themselves, generally burst spontaneously;" and, 2*dly*, That, "though it may be allowed that making four punctures instead of one or two, the number usually

* Monro, p. 154.

† Med. and Surg. Journal, Vol. XIV. p. 400.

made in this country, will *increase the chances of infection;* it passes all power of comprehension to conceive how increasing the number of punctures can in any way tend to *insure the production of a genuine cow-pock.* The admission of this hypothesis would oblige us to believe that vaccine virus differs in this respect from that of small-pox, of itch, or of syphilis. For who ever imagined that the genuine nature of these diseases depended in any degree either upon the quantity of their specific contagions, or upon the number of points on the surface of the bodies through which they had been introduced? Were this supposition to be admitted, it would follow, I conceive, that a greater quantity of vaccine virus is required for the inoculation of an adult than an infant; unless we are to be told that it is by virtue of the number of the punctures, as well as by the quantity of the vaccine virus employed, that genuine cow-pox pustules are produced." p. 312.

This extract, we believe, expresses the general opinion of practitioners in this part of the country on this point. Their attention in conducting the process of vaccination has been directed to the regular progress of the disease, and formation of the areola round the vesicle or vesicles excited. When the vesicle has been too early opened or abraded, they have often seen the areola *prevented from forming* regularly, and have, therefore, repeated the vaccination. But when the areola *has formed at the proper time*, and been of the proper size and duration, and a characteristic cicatrix been left, they have judged the disease to be genuine, whether the vesicle were opened or not.

Farther, we can conceive no use either in multiplying the numbers of vesicles or in leaving any of them unopened, except this, that the *constitutional effect* of the poison is thereby insured. Now, on this point many practitioners have thought themselves quite safe in consequence of having used Mr Bryce's test, and found it to answer. For it appears utterly inconceivable that the vesicle excited, according to his method, in the other arm, can be prevented from running its regular course, and made to imitate precisely the changes in the arm first vaccinated, unless it be by a constitutional affection resulting from the first vaccination. Yet various children who had been subjected to this test have taken the modified small-pox; for example, Dr Monro's three children, vaccinated by Mr Bryce, in whom, indeed, the vesicle first excited was opened, but in whom the areola formed quite regularly, and in whom the test answered perfectly.*

We trust we have said enough to shew that the Scottish

* For a full account of these cases, see Dr Monro's work, p. 160.

practitioners have not lightly and hastily set aside the supposition of imperfect vaccination having been the cause of the frequent affection of vaccinated persons during the late epidemic, but that they have found it, on due and deliberate examination, neither so well founded on general reasoning, nor so far justified by experience, as to afford a satisfactory explanation of the phenomena.

Another explanation of the frequent occurrence of modified small-pox after vaccination in this and other countries has been suggested, and deserves the more consideration, as it is understood to be that which is espoused by the venerable Dr Jenner, although opposed to the opinion of Mr Moore, * namely, that the vaccine virus has degenerated in its quality in consequence of passing through a succession of individuals of the human species, without recurring to the original source of the disease in the cow or horse. We are not acquainted with any decisive facts either for or against this hypothesis, but Dr Thomson states, as reasons for entertaining great doubt of its validity, 1. That no such deterioration has ever been observed of any other contagious disease; 2. That "the vaccine virus used at the Royal Public Dispensary here, and in other parts of Scotland, for a series of eighteen years, still continues to produce in those who are inoculated with it the very same appearances which it produced on the first trials that were made with it, and the same which have been delineated and described by Dr Jenner as characteristic of cow-pock;" and, 3dly, That recent equine matter, sent down to him by Dr Jenner, produces exactly the same appearances. p. 311.

The occurrence of modified small-pox, in some vaccinated individuals, in whom the vaccine vesicle has followed its regular course, and the exemption of others similarly vaccinated, we conceive therefore, on the whole, to be referable only to peculiarity of individual constitutions. And this explanation we apprehend to be confirmed by the fact, that several children of the same family, even although vaccinated by different persons, have often been observed to take the modified small-pox, while other whole families, equally exposed, have escaped. Various examples of this occur in the works of Drs Thomson and Monro, and in the other papers to which we have referred.

Still, however, there is a difficulty in understanding how it has happened that so many examples of this constitutional peculiarity have occurred within a short period, and within narrow

* History and Practice of Vaccination, p. 284.

limits, as for example in the village of New Lanark, where 251 vaccinated children were affected, while in other places, for example in London, where it appears from the report of the Vaccine Establishment that 1472 persons died of the small-pox in 1817-18, the modified small-pox is comparatively rare.

The only explanation which we can give of this is, that the *constitution of epidemics*, as well as of individuals, is various, and that the contagion of the epidemic which has lately prevailed in Scotland has probably been unusually virulent. This opinion is distinctly expressed in the volume before us, both by Dr Thomson and Mr Bryce.

"It is well known," says Dr Thomson, "that the mortality of variolous epidemics has, in particular years, not amounted to 1 in 50; whereas, the mortality of the present epidemic has, according to my observation, been not less than 1 in 4 of the unprotected, who have been attacked by it. When a variolous epidemic shall again occur of a milder kind, it appears to me probable, that not only the number of those who may be attacked with secondary small-pox, and with small-pox after vaccination, will be greatly diminished, but also, that the disease in these two classes of persons will probably bear a stronger resemblance to the descriptions that have been usually given of chicken-pox." p. 203.

"Of late," says Mr Bryce, "while the small-pox raged in this neighbourhood, and in several other parts of Scotland, under a more severe form than had been known in this country for perhaps upwards of 40 years; the eruptive disease with which those who had been vaccinated, as well as those who had formerly undergone an attack of small-pox, have been frequently affected, has also been observed to be considerably more severe; the eruption has been more numerous, and it has approached nearer in its progress to cases of mild and distinct small-pox."—"I am well convinced, that this nearer approach to regular small-pox than what I had formerly observed, is entirely to be attributed to a greater than usual malignancy in the nature of the lately prevailing epidemic." p. 63.

The general fact of the contagion of all contagious diseases being more virulent during certain epidemics than at other times, will not be disputed, we believe, by any one who is either deeply read in their history, or familiarly acquainted with their phenomena. "The distemper," says Dr Russell, speaking of the plague, "seems to be extinguished by some cause or causes equally unknown as those which concurred to render it more or less epidemical in its advance and at its height. In Europe, something may be ascribed to the cleansing of houses and goods, &c. but at Aleppo, where the distemper is allowed to take its natural course, and few or no means of purification are employed, it pursues nearly the same progress in different

years; it declines and revives at certain seasons, and, at length, without the intervention of human aid, ceases entirely." *

That the contagious property of the late malignant epidemic was unusually violent, may, we conceive, be concluded with tolerable confidence from two circumstances; 1st, That an unusual number of persons, who had before had small-pox, were affected by it; and, 2dly, That it appeared clearly that several of the vaccinated persons who took modified small-pox in this epidemic, had previously been exposed to the contagion of small-pox, and resisted it. Thus Dr Hennen says, in describing the modified small-pox in his own son, "he has been often, since he was vaccinated, exposed to variolous contagion in Spain, France, and Portugal, and particularly last year at Portsmouth."

Our belief therefore is, that in many persons, and particularly during the prevalence of epidemics of unusual malignity, *more is not to be expected from vaccination*, than a *modifying* influence over the contagion of small-pox; and it is truly gratifying to find, how very generally this modifying influence has been found to operate. The testimony of Dr Thomson on this subject, after full consideration of what he had himself seen, and been informed of by his numerous correspondents, is most important. "I have the pleasure to know, that in every instance in which, during the present epidemic, there has been even a single mark of vaccination having taken place, the modifying power of cow-pock has been most satisfactorily demonstrated." p. 314.

Six cases have, indeed, been put on record, during the epidemic of the last three years, of death from what was conceived to be small-pox after vaccination. Of two of these we are only informed, by Mr Black of Newton Stewart, that in one the cicatrix "was large, and failed in complete specific physiognomy as to regularity and indentations;" in the other, the cicatrix was more genuine, yet "not satisfactory to the medical attendant when examined during the illness." The symptoms of these cases are not stated. Of two others mentioned by Dr Henderson of Perth, and Mr Syme of Blairgowrie, we have no account whatever, excepting that the latter (who was moribund before Mr Syme saw him) "had the cicatrix distinctly." Of the fifth case, we have a distinct account by Dr Dewar, and it was manifestly an anomalous and complicated case, the patient having been previously ill, and having

* Russell on the Plague, p. 109.

died as early as the seventh day, with very unusual symptoms. The sixth is the case of Mary Taylor, to be found at p. 171 of the volume before us, which was allowed by all who saw it to be anomalous, (the eruption having been nowhere confluent,) and which was considered by several practitioners who saw both it and the others in the neighbourhood, as not small pox, but unusually aggravated chicken-pox. It is obvious, that the most trifling complaints may be dangerous or fatal, when their progress is attended with similar anomalies, and therefore, if other cases of fatal small pox after vaccination shall be found on examination equally anomalous with these two, we may fairly assert of the cow-pox, that where it does not prevent small-pox it disarms it of its terrors.

But a question occurs here, which has been repeatedly agitated, and to which we regret to find, that this volume does not contain as explicit an answer as could have been wished, whether the modified small-pox is, as some have asserted, a more severe disease at a considerable distance of time after vaccination than soon after it. Dr Thomson says, indeed, in general, "Nothing has occurred, so far as I have been able to perceive or learn, to warrant the supposition, that the modifying or preventive powers of vaccination are weakened or exhausted by time; on the contrary, the present epidemic has been observed to attack those chiefly who were under ten years of age; increasing years appearing, in general, to lessen the susceptibility of small-pox contagion." p. 34. And Mr W. Gibson of New Lanark has given, at page 253, a table, marking the intervals of time which had elapsed between vaccination and the occurrence of modified small-pox, in the 251 cases attended by him, which is very satisfactory on this point, the greatest number having occurred after an interval of one year from the date of vaccination. But the more important question is not answered, whether the disease has been more severe, has approached more in its characters to genuine small-pox, in those vaccinated long before it than in those recently vaccinated; and, as several observers of the late epidemic have given an opinion, in general terms, on the affirmative side of this question, * we cannot but regret that the attention of Dr Thomson's and Dr Monro's numerous correspondents was not particularly drawn to this part of the subject.

On the whole, the general effect which the occurrence of this epidemic has had on the minds of the practitioners, who have

* For example, Dr Adam of Forfar, (App. p. 44,) and Mr Oswald of Douglas in the Isle of Mann, (p. 282.)

witnessed it has been, *to limit our confidence in the preventive power* of cow-pox over small-pox, but, at the same time, to *extend and confirm our knowledge of its modifying power*; and, it is particularly pleasing to find, that the same conviction has extended to the public at large, and that an epidemic which threatened, at its commencement, to injure most essentially the practice of vaccination, has ended by promoting and establishing it. "The comparison of small-pox in their modified and unmodified forms," says Dr Thomson, "has often forced a conviction of the advantages of cow-pock inoculation on the minds even of the most ignorant and prejudiced, and induced them to seek protection for themselves and their offspring in a practice which they had formerly neglected or despised;" p. 43; and it is stated distinctly, both by Dr Mudie of St Andrew's and Mr Gibson of New Lanark, that "the occurrence of modified small-pox after vaccination has had the very best effect in completely establishing the credit of vaccination." pp. 244, 253.

Our limits oblige us to content ourselves with referring to the work before us, (p. 30,) to Dr Monro's book, (p. 77,) and to Dr Hennen's paper in this work, (Vol. XIV. p. 409,) for the instances which this epidemic has afforded of small-pox occurring for the second time, either in a regular * or in a modified form. We must observe, however, that this last occurrence does not appear to us to have been so common as to entitle us to suppose, as some have done, that in regard to preventive and modifying power over future attacks of small-pox, cow-pox and small-pox itself are on the same footing. Dr Thomson, as already observed, could only hear of 71 cases of small-pox after small-pox; and, in the opinion of several practitioners, a part of these were the effect of a separate contagion, that of chicken-pox. On the other hand, in several of the cases where small-pox occurred for the second time, it ran its regular course, and in three instances it was fatal. It would appear, therefore, from the facts hitherto recorded, that the *preventive* power of the small-pox is greater than that of cow-pox; but, on the other hand, that the *modifying* power of the cow-pox is superior to that of small-pox.

Another conclusion, which we stated in the beginning of this paper, as fairly deducible from the observations made on the late epidemic, demands more minute attention here, because it is intimately connected with the peculiar opinion which the volume before us is chiefly intended to support. We have said, that

* The Reports of the National Vaccine Establishment for 1818-19 state, that in these two years 27 cases of regular secondary small-pox had been reported to them.

it now appears distinctly, that the diagnosis of chicken-pox and small-pox, to which many practitioners have trusted, founded on the short duration and *vesicular character* of the eruption in the former case, is, in many cases, not applicable. On this point we believe all the practitioners who have seen much of the modified small-pox in the late epidemic are now agreed. Dr Thomson has been so strongly impressed with this observation, that he has been induced to question the separate existence of chicken-pox, being persuaded, that all the appearances described under that name may be produced by the contagion of small-pox. Mr Bryce and Dr Abercrombie, though they still believe in the existence of two separate contagions, bear testimony to the correctness of this observation, that the eruption of the modified small-pox often answers to the description of chicken-pox, in being short in its duration, and *vesicular in its character*;—contending at the same time, however, that there are certain *distinctive marks* by which the vesicles of modified small-pox may be known from those of chicken pox. As this acknowledgment of these gentlemen does not appear to have been duly weighed by Dr Thomson, we shall quote their words:—"Of late," says Mr Bryce, "the eruption (of modified small-pox) has been more numerous, and it has approached nearer in its progress to cases of mild and distinct small-pox, having been, in many cases, papular, *vesicular*, and frequently pustular, in succession." * The addition of the adverb "frequently" is enough to shew, that, in Mr Bryce's observation, the modified small-pox has occasionally been papular and vesicular, without becoming afterwards pustular. Dr Abercrombie states more explicitly in regard to the modified small-pox:—"The eruption appears in the form of small inflamed papulæ, which, in the course of three days, begin to assume a *vesicular appearance.* They increase to the fourth or fifth day, and then die away into clear horny crusts, &c. *A few* of them sometimes stand out for a longer period, and advance to a partial or complete suppuration." † Neither of these gentlemen mention, what we are nevertheless satisfied, from our own observations, is the fact, that the contagion of true small-pox occasionally produces, in the *unvaccinated*, particularly in very young children, an eruption which is merely papular and vesicular, forming into crusts within four or five days, and never becoming pustular. Dr Alison, one of the physicians of the New Town Dispensary, in his letter to Mr Bryce, (p. 78,) bears testimony

* Thomson, p. 63. † Ib. p. 58.

to the correctness of Dr Thomson's observation on this point. And the same thing has been observed by former authors.* The importance of these quotations, in regard to the question at issue between these gentlemen and Dr Thomson, will appear immediately. At present we shall only add to them the observation of Dr Thomson himself, which we believe to be also perfectly correct, that "the mildest form in which the small-pox has occurred, as well as the most malignant, have been both strictly vesicular eruptions, in which scarcely a particle of purulent matter was to be observed, from their commencement to their termination." p. 29.

These observations suggest an important criticism on the mode of classifiying eruptive diseases by the appearance on the skin *alone*, without reference to the constitutional symptom, which is at present much in vogue. In the classifications of Dr Willan, and of Dr Mason Good, varicella is completely separated from variola, and arranged along with miliary eruptions, aphthæ, &c. because the eruption in it is vesicular. Now, if Dr Thomson's hypothesis of the identity of small-pox and chicken-pox be true, we have thus two varieties of disease, separated into distinct genera, or even into distinct orders, which have these points of natural alliance between them, that they proceed from the same contagion, and that each of them is capable of engendering the other. Nor will this mode of classifying these diseases fare better, if the opinion maintained in the volume before us by Mr Bryce and Dr Abercrombie, of the separate existence of chicken-pox and small-pox, shall be found to be correct. For it appears, from their description of the cases, to which they give the name of chicken-pox, which we shall presently quote, that these cases, in their progress, pretty frequently become pustular; and it appears from their account of modified small-pox already quoted, that that disease, throughout its progress, often continues vesicular. On this supposition, therefore, the error which we have just pointed out, instead of being done away, is precisely doubled.

We cannot help thinking, that any nosological arrangement of febrile eruptive diseases, which is founded solely on the appearances observed on the skin,—which separates small-pox from chicken-pox, and both of these from measles and scarlet-fever,—and which classes these last along with the nettlerash, a disease differing from them in these essential particulars, that it is not contagious, that it has not a determinate course, and that the susceptibility of it is not in the least diminished by its having once occurred,—cannot be justified without losing sight of the

* See Moore's History and Practice of Vaccination, p. 106.

useful practical purposes which render it important that diseases should be classified at all, or studied in connection.

We come now to the question which the work before us is chiefly intended to decide, Whether small-pox and chicken-pox are or are not separate diseases? We must observe, however, in the outset, that Dr Thomson does not undertake to do more in the present volume than answer this question,

"Whether more than one contagion can be supposed to have operated in the production of *the present* varioloid epidemic, either in Edinburgh or in the other places in which I have had an opportunity of observing the disease. The point more immediately at issue is not, I conceive, whether there exist a disease such as Dr Heberden describes, specifically distinct from small-pox; but merely whether any contagion beside that of small-pox can have contributed to produce any part of the epidemic of which I have attempted to give an account." p. 77.

In the observations we are now to make, we shall lay ourselves under a similar restriction. We shall, in the first instance, endeavour to expose what we conceive to be a fallacy in the statements and reasonings by which Dr Thomson has attempted to prove that one contagion only can lately have existed in Edinburgh. Afterwards we shall state what appear to us strong presumptions in favour of the opposite opinion.

His reason for answering the question above stated in the negative is quite simple. He has been at great pains to prove, that in every situation in which the "varioloid epidemic" has prevailed, some cases have occurred answering to the description of small-pox, and others answering to that of chicken-pox; the former being chiefly, though not solely, in the unvaccinated; the latter chiefly, though not solely, in the vaccinated. Hence, he argues, those who contend that the two diseases are different, must suppose the two contagions to have coexisted wherever either of them has been found. This of itself is sufficiently improbable, but it becomes absolutely incredible when we find farther, 1st, That the vesicular disease, or chicken-pox, has everywhere appeared to give rise to the pustular disease, or small-pox, and *vice versa*; and, 2dly, That those who have suffered the one have been thereby almost uniformly protected from the other. Having established these points, he concludes, "I am at a loss to conceive what other sort of evidence, besides that which I have already adduced, can be required to establish the probability of these two forms of the disease having had a common origin." p. 233.

This argument appears, at first sight, so strong, that the reader must be surprised to find Mr Bryce stating in opposition

to it, that " his observations are sufficient, in his opinion, to warrant him in concluding that the chicken-pox is in its nature quite distinct from the small-pox," p. 75; and Dr Abercrombie giving his decided opinion that various circumstances which he has stated " appear to him to afford all the evidence in support of the doctrine of the essential difference of the two affections that we can reasonably look for in a case of this kind." p. 189.

We apprehend that any skilful logician, on being informed of so striking a difference of opinion in regard to the conclusions to be drawn from known facts, pronounced by judges whose competency to decide on the import of these facts will not be disputed, would be apt to suspect an ambiguity in the use of terms; and that this has really occurred in the present instance, and has deceived our author very materially in regard to the strength of his conclusions, may be shewn, we think, in a few words.

Dr Thomson has assumed throughout his whole argument, that if there be an essential distinction between chicken-pox and small-pox, the former term will necessary include, and that in point of fact, in the apprehension of Mr Bryce and Dr Abercrombie it does include, all those cases of eruptive disease which are short in their duration, and vesicular in their character during the whole or the greater part of their progress. That we may not be accused of misrepresenting him on this point, we must make two quotations from his book.

" That an eruptive disease, resembling in its symptoms the descriptions usually given of chicken-pox, has formed a large portion of the present varioloid epidemic among the vaccinated, is a fact which does not admit of doubt; and that this supposed chicken-pox has in every situation accompanied small-pox wherever they have made their appearance, is equally indubitable. Mr Bryce states that he had seen this disease in two unvaccinated and in twenty vaccinated persons during the last ten months. I had seen this form of the disease in eighteen unvaccinated persons before I drew up my account of the epidemic, and I have seen it in three others since that time. I have kept no account of the number of the vaccinated affected with the disease in the *vesicular* or in the *vesiculo-pustular* forms, because these seemed to me to be the most common forms in which modified small-pox occur. But taking the ratio given by Mr Bryce as the ground of my calculation, 2 being to 20 as 21 to 210, I must have seen this last number of cases of the varioloid disease in the vesicular form in the vaccinated; and I know that a great number of these cases have been declared to be chicken-pox by those who have seen them. From this calculation also, it is obvious, that of the 310 cases which I have conceived to be, and described as cases of modified small-pox, not more than 100 can have been truly such," p. 115.

We quote this passage merely in order to shew (what every one who reads it attentively will perceive) that Dr Thomson conceives that all the cases of eruption in vaccinated persons, which have occurred in the vesicular and vesiculo-pustular forms, would be considered by Mr Bryce as chicken-pox.

Again,

"The conclusion which seems to me to follow necessarily from the results of my observation, can be evaded, I conceive, only in one of two ways; either, 1st, By supposing, that in observing and recording the cases of the varioloid epidemic which I have detailed, I have uniformly confounded the strictly vesicular form of the eruption with the pustular; or, *in other words*, the form of the eruption which Mr Bryce denominates chicken-pox, with that which Dr Abercrombie has denominated horn-pox," &c. p. 233.

We quote this passage merely to shew that Dr Thomson conceives that Mr Bryce's term chicken-pox corresponds to his own term, "vesicular form of the disease;" and Dr Abercrombie's term horn-pox (which is synonymous with modified small-pox) to his own term, "pustular form of the disease."

Now the passages which we have already quoted from Mr Bryce's and Dr Abercrombie's account of modified small-pox (p. 243) shew quite distinctly that what they call modified small-pox is generally, during the greater part of its progress, a vesicular or vesiculo-pustular disease; and we are quite sure that there is nothing in the history which Dr Thomson has given of the vesicular and vesiculo-pustular small-pox (p. 21 &22) which Mr Bryce and Dr Abercrombie would not admit to be applicable to many cases of what they call, not chicken-pox, but modified small-pox. It is *not by the disease being vesicular* in its early stage, but by the *vesicular disease during the first few days shewing certain determinate characters*, that they have attempted to distinguish and characterize the chicken pox.

As the distinction, which these gentlemen conceive that they have observed between chicken-pox and modified small-pox, does not turn upon the circumstance of the one being a vesicular and the other a pustular disease, they need not suspect Dr Thomson of having "uniformly confounded the strictly vesicular form of the eruption with the pustular," but they may, nevertheless, suspect him of having confounded "the form of the eruption which Mr Bryce denominates chicken-pox with that which Dr Abercrombie has denominated horn-pox." And, indeed, according to their view of the matter, it was not only easy for him to confound, but it was impossible for him to distinguish, in the way in which he proceeded, these two, as they apprehend, different diseases, because the marks of distinction

which they conceive themselves to have observed, are different from those by which he has been guided.

To illustrate this by an individual case, Dr Thomson gives, at p. 181, the following account of the case of Anne Cairns, æt. 6 m. unvaccinated.

"After a very slight previous indisposition, a purely vesicular eruption was discovered on different parts of her body on Monday, 21st of June. This eruption continued vesicular throughout the course of the disease. By the 4th day several of the vesicles had fallen, and were almost completely faded; and by the 5th day the whole of the eruption had entirely disappeared, leaving only superficial cutaneous discolorations, except five or six vesicles on the right hand and arm that formed into extremely small horny scabs, which in the course of three days fell off, exposing very slight tubercular elevations of the cutis."

Now, with the particulars of this case after the third day we happen to be acquainted, and we are happy to bear witness to the general correctness of this statement. It was one of the cases, of which there have been several in the course of the epidemic, where the contagion of true small-pox (to which this child had been fully exposed) produced, in a young unprotected infant, merely a vesicular eruption, which dried up within five days; and it happened in this case that the inflammation subsided so quickly that, after the formation of the scabs, there was very little of the horny or tubercular appearance which generally characterizes truly variolous eruptions, excepting only on the right hand and arm where there were, as have been stated, some extremely small horny scabs, which left very slight tubercular elevations. Dr Thomson mentions this, therefore, as "a fair example of what he has described under the name of mild vesicular small-pox;" and asks, if "there is to be found in the records of the disease an example of a case answering in every respect more exactly to the definitions that have been given, and to the notions that have been generally entertained of chicken pox?"

We know, however, that although the eruption in this case was vesicular, and was dried in five days; and although *after the period of its drying* there were no marks by which it could be distinguished from chicken-pox, yet the *appearance of the vesicles before their drying*, which is not described in the account given of the case in this work, was such as, in the opinion of several gentlemen who saw it, *clearly distinguished it* from those cases of vesicular disease to which Mr Bryce gives the name of chicken-pox; and it is in fact alluded to by Dr Alison in his letter to Mr Bryce as having been, in his apprehension, before

the time of the formation of the crusts, exactly similar, not to chicken-pox, but to modified small-pox or * horn-pox.

This was an unusual case, as it occurred in an unvaccinated child, but we know that many cases, equally vesicular in their character, and equally short in their progress, occurred in vaccinated persons, which Mr Bryce and Dr Abercrombie had no difficulty in referring to the contagion of small-pox, but which they at the same time thought they could distinguish, by the appearance of the eruption in its early stage, from the cases which they called chicken pox. We are quite certain, therefore, that under the head of vesicular and vesiculo-pustular small-pox, Dr Thomson, instead of including, as he supposed, those cases only which his opponents would have called chicken-pox, has included a large number of cases, which they would have called mild or modified small-pox, along with a small number which they would have called chicken-pox; and, therefore, although he has proved very satisfactorily, that in every instance in which small-pox has occurred in Edinburgh, *pustular and vesicular eruptions have occurred together*, and in connection, yet he has *not* proved, that in all these instances *small-pox, and the peculiar eruption which his opponents call chicken-pox, have occurred together*. And of course, as his whole argument is founded on that coexistence, it must fall to the ground, unless this point be established.

It appears even, from the volume before us, that Dr Thomson has not only conceived that Mr Bryce and Dr Abercrombie must give the name of chicken-pox to many cases which they have thought manifestly distinct from chicken-pox, but he has also conceived that they must give the name of small-

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* In the Report of the New Town Dispensary for April 1819, quoted by Dr Thomson, (p. 122,) Dr Alison observes, that "in a few constitutions, altogether unprotected, the contagion of small-pox had produced symptoms answering to the descriptions of chicken-pox," because, as he afterwards states, "the eruption was formed into thin flat scabs, and the inflammation about these was nearly gone about the fifth day. The eruptive fever was trifling." These appearances, in a constitution altogether unprotected, were thought sufficient to characterize chicken-pox; but Dr Alison states afterwards in his letter to Mr Bryce, that, having had an opportunity of seeing a case of this kind (the case of Cairns) before the formation of the crusts, he found the appearances to be those of modified small-pox, not of chicken-pox, as defined by Mr Bryce and Dr Abercrombie.

The only part of the history of the above case, as given in Dr Thomson's work, which we should suspect not to be perfectly accurate, is the statement of the eruption having been *purely vesicular* from the first. From our observation of the appearance of the eruption in this case, we should be inclined to suspect that it must have been papular for some little time (perhaps 24 hours) before it became vesicular.

pox to various cases which they have regarded as chicken-pox. We allude particularly to the cases which occurred in Jamaica Street, and of which an account is given at p. 164 *et seq.* Several of these cases were severe, and one fatal, but they were not more severe in the unvaccinated than in the vaccinated;—the only fatal case was in a vaccinated child, and attended with various anomalies, and we know, that in the appearance of the eruption in all these cases, before the formation of the crusts, Mr Bryce and Dr Abercrombie recognized the marks by which they conceive that chicken-pox may be characterized and distinguished from small-pox, and which we shall now quote.

"This eruptive disease," says Mr Bryce, speaking of the vesicular disease, to which he conceives the name of chicken-pox ought to be restricted, "as I have observed it, generally attacks with little or no fever, the *appearance of vesicles* on the shoulders, neck, and breast, being often *the first symptoms observed.* The vesicles are often, when first seen, *about the size of a split pea*, perfectly transparent, and covered only by *the cuticle, as thin as that separated by a scald* or a blister; they generally have at first an inflamed areola, but this seems also to be confined to the cuticle, and there seems to be *little if any hardness* in the true skin beneath or around them. *On puncturing the vesicle, the clear lymph is wholly evacuated, the cuticle falls down, and very little if any hardness is perceived on passing the finger over the collapsed vesicle,*" &c. "The vesicles generally increase in number for several days, and while new vesicles are appearing on some parts of the body, those which had first come out are beginning to shrivel, and the fluid contained in them has become somewhat milky. *Many of them are broken by the second or third day*, and have a small crust formed in the centre, which adheres to the skin beneath, and is surrounded by an opaque or milky fluid, confined by the shrivelled cuticle. When the eruption is numerous, the body has the appearance of having been exposed to a shower of boiling water, each drop of which had occasioned a vesicle or blister: and these are generally on the second or third day, when turgid, broader at the summit than at the base. When the vesicles remain unbroken for four or five days, as is sometimes the case, the covering of cuticle, as well as the contained fluid, become opaque, *and the latter purulent.* The vesicle is then much flattened, and *in this stage of the disease is hardly to be distinguished from small-pox*, unless by the very thin, delicate, and shrivelled appearance of the covering cuticle." p. 64.

Dr Abercrombie's account of the disease, to which he thinks the name of chicken-pox should be restricted, is this: "This eruption is preceded for a day or two by fever, generally slight.

When a single specimen of the eruption is minutely examined, it is found to be *from the earliest period a watery vesicle*, covered by a *thin pellicle of skin*, which usually has a loose shrivelled appearance. The vesicles increase in size for three or four days, and *then generally burst*, the fluid drying into loose scaly crusts, of a light yellowish colour. In some constitutions, and on some parts of the body, where the cuticle is unusually strong, the vesicles may continue unbroken for a longer period, perhaps to the sixth or seventh day, and in these cases they assume a *yellow puriform appearance*, considerably resembling the pustules of small-pox. *If one of the vesicles of this eruption be punctured on the second or third day*, so as carefully to discharge all the fluid, *the pellicle which covered it falls down, and the finger being then carried over it, it is found to be correctly on a level with the surrounding integuments.*" p. 184.

Dr Abercrombie adds as a contrast, "If one of the vesicles of the horn-pox (or modified small-pox) be opened on the third day, so as carefully to discharge all the fluid which it contains, and the finger then be carried over it, there is found remaining a *firm tubercular base, considerably elevated above the surrounding integuments.*"

Dr Thomson objects to the distinction of modified small-pox by the tubercles which are seen below the vesicles, that tubercles are described both by Van Swieten and by Dr Heim of Berlin, as occurring in *regular* small pox. * Of this fact, we hardly require the authority of these learned authors to inform us, the slightest observation being sufficient to shew, that tubercles exist below the pustules (or rather vesicles) in the early stage of regular small-pox, most of which are generally dissolved away as the pustules pass into complete suppuration, but a few (particularly on the legs and arms) often stand out to the end of the disease, and even longer. But it must be remembered, that Dr Abercrombie does not state the existence of tubercles in the early stage of the disease, as a mark of distinction between modified and regular small-pox, but as a mark of distinction between small-pox, *in any form*, and chicken-pox, and therefore, the existence of tubercles in the early stage of both varieties of small-pox is rather favourable than adverse to the justness and importance of the distinction he points out.

Dr Thomson seems to think that the descriptions of chicken-pox now quoted do not agree with one another, but we apprehend that the marks which we have printed in italics in the letters of Mr Bryce and Dr Abercrombie, are sufficient to enable practitioners to recognize in its early stage the *peculiar*

* See pp. 197 and 199.

vesicular eruption which is here described, and distinguish it from the ordinary, if not from the only appearance, of modified small-pox. The most material of these marks are the following. 1st, The eruptive fever is *generally* shorter than that which precedes small-pox, that is, although a few cases of this eruption may occur in which the eruptive fever lasts three days, yet on comparing any given number of cases of this eruption, with an equal number of cases of the common form of modified small-pox, a great majority of the former will have a considerably shorter eruptive fever. 2d, The eruption becomes more quickly vesicular; indeed, it is described as appearing vesicular from the first, when minutely examined, and the vesicles attain a large size in a much shorter period. "They are often," says Mr Bryce, "as large as a split pea when first seen." Dr Abercrombie says, by way of contrast, that the modified small-pox or horn-pox becomes vesicular "in the course of three days." This, however, is not strictly applicable to all cases, for there are instances of unequivocal modified small-pox becoming vesicular, at least in part, as early as the first day. Thus, in Dr Hennen's child, the appearances in whom were very carefully watched, "some of the papulæ became distinctly vesicular within twelve hours of their appearance;" but still, in all the cases we have seen in this early stage, sufficient marks of distinction have existed; the vesicles being much less prominent, and much smaller, both absolutely, and relatively to the inflamed bases on which they stood, than in the chicken-pox; and, it appears from Dr Hennen's farther statement, that a part of the eruption in his son never became vesicular at all, for when "the pustules began to dry up, the papular eruption began to scale off," an appearance often observed in modified small-pox, but not mentioned at all in any descriptions of chicken-pox. In general, we believe that the eruption of modified small-pox, at least when distinct, is *papular*, shewing little or no fluid, for two days after it appears, while, in the eruption here called chicken-pox, the *vesicles appear from the first* and constitute by far the larger portion of the elevations of the cuticle on the second day. 3d, After the vesicles have appeared in the modified small-pox, they are in the first instance "elevated on solid tubercular bases," whereas in chicken-pox the inflammation at the base of the vesicles is hardly accompanied with any swelling. Hence the remarkable difference observed when the vesicles are opened and the fluid evacuated as early as the second or third day. 4th, The cuticle covering and containing the fluid is much thinner in the vesicles of the chicken pox than in those of the modified small pox, and hence the vesicles are more

transparent at first, and are afterwards more generally broken.

In order to facilitate this diagnosis, we would particularly refer our readers to Dr Monro's second plate, Fig. 5 and 6, where there is a very good representation of the appearance of the eruption of chicken-pox on the second or third day. The vesicles here are full and turgid, but in many cases they are, as Dr Abercrombie states, rather loose and shrivelled in their appearance, though without the depression on the centres, which has been considered by many as one of the best marks of true small-pox. We suppose the true difference is, that the inflammation here is nearly confined, in the first instance, to the very surface of the true skin, instead of pervading its substance, as in the small-pox, and increasing its thickness.

We have no hesitation in saying, from what we have seen of these diseases, that certain cases may be distinguished by practitioners who choose to attend to these marks, and confidently referred to the head of chicken-pox, as described by Mr Bryce and Dr Abercrombie. But, in order that this may be done, two cautions must be here given. 1st, It is quite essential that the eruptions be seen as early as the second or third day, before any part of them begin to form crusts. After this period, in a few of the cases, which answer to the description of modified small-pox or horn-pox, the inflammation subsides so rapidly, that nothing like tubercles or horny scabs remains; and on the other hand, in some of the cases which answer to the above description of chicken-pox, the inflammation increases after the third day, and more or less of the eruption becomes pustular and tubercular. 2dly, In judging of the nature of any individual case, we must be guided by the appearance of the majority of the eruption. There will often be found a few vesicles, differing in appearance from what may safely be pronounced, after an inspection of the whole body, *the general character of the eruption*, just as in the best marked small-pox we have often observed a few small vesicles, filled up long before the maturation of the eruption at large, without for a moment imagining, that the appearance of these vesicles was to change our notion of the nature of the disease.

We must here say a few words in regard to a remark which we have often heard made, upon the attempt to distinguish chicken-pox from modified small-pox, that the particulars selected for this purpose are not the characteristics of chicken-pox, as delivered by the older authors, and therefore, that the chicken-pox of Mr Bryce, if it be really a distinct disease, is a new disease. On this point we would observe, *first*, that the

characters assigned to chicken-pox by Mr Bryce, so far as we have hitherto considered them, if they do not exactly correspond to, are at least *perfectly consistent with* the best descriptions formerly given of chicken-pox, and that, without supposing him to have described a new disease, we may very well suppose him to have given a more accurate description than had been formerly given of an old disease.* And *secondly*, That, supposing the chicken-pox to be a distinct disease, there is a special and obvious reason for the characters on which he now insists, not having been particularly noticed by the older authors, namely, that the chicken-pox was only an object of importance to these authors on account of its similarity to the small-pox, and therefore, that their attention in observing and describing it was chiefly and very properly directed to the marks by which it might be distinguished from small-pox. Now, the simple and obvious way of making this distinction was, by the *vesicular character*, and *short duration* of the eruption. In the days when modified small-pox was unknown, this was all that it was important for any practitioner to know of chicken-pox. But it must be remembered, that small-pox itself is first a papular and then a vesicular, before it becomes a pustular disease, (the fluid of the eruption, for two or three days being, as Cullen says, "almost colourless, or whey-coloured,") and that the effect of the modification of small-pox which is produced by cow-pox is to arrest the progress of the disease, most generally at this very period, and prevent its ever advancing from the vesicular to the completely pustular form. Hence it is quite clear that, although the two diseases be different, these two leading marks, by which the practitioner was wont to distinguish chicken-pox from regular small-pox, *must* fail him when he attempts to distinguish chicken-pox from modified small-pox; and therefore, without supposing the original distinction erroneous, it is obvious that new marks of distinction must be sought for, applicable to the new form in which small-pox has presented itself.

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* The account given of the early stage of chicken-pox in Moore's History and Practice of Vaccination, p. 103, and in Heberden's Commentaries, p. 389, agree exceedingly well with the descriptions of Mr Bryce and Dr Abercrombie. Of the three marks of distinction on which Heberden rests his diagnosis in the following passage, the last, from the circumstance we have noticed in the text, is now inapplicable, but the two first correspond very nearly with the observations of these two gentlemen. "Veræ variolæ a variolis pusillis discerni possunt tribus potissimum conditionibus. Nam primo veræ nunquam ante quartum diem exeunt; deinde, in earum apicibus nullus est humor secundo tertiove die; nec denique crustæ sunt quinto."

But, although we have no doubt, that careful observers may distinguish eruptions to which the descriptions above given of chicken-pox apply, yet we cannot undertake to speak with equal confidence as to the question, whether these eruptions will be found to answer, in all particulars, to the notions Mr Bryce and Dr Abercrombie entertain of chicken-pox. By future observation, however, this question may be resolved, we should conceive, without much difficulty. If these gentlemen are right, eruptions answering to the description just given, will be farther distinguished by the following marks.

1. They will always give rise to eruptions similar to themselves, *i. e.* the eruptions which spring from their contagion will always be distinguished, in their early stages, by the same characters.

2. They will affect indiscriminately those who have had cow-pox, those who have had small-pox, and those who have had neither, and will not be more severe in the latter than in the two former. This was unquestionably the case in the little epidemic in Jamaica Street referred to by Dr Thomson, (p. 164,) in which the only patient that died had been vaccinated, and its case was confessedly anomalous in various respects; and an unvaccinated child had the disease extremely mildly.

3. They will furnish no protection against the future contagion of small-pox.

4. They will hardly ever be confluent or dangerous to life.

It appears to us that, by observation of these circumstances, we may soon hope to arrive at a positive conclusion on this subject. For if we find an eruption distinguished in its early stage by Mr Bryce's marks of chicken-pox, manifestly giving rise, even in a single case, to unequivocal small-pox in an unprotected child, or to an eruption, distinguished in its early stage by Dr Abercrombie's marks of horn-pox in a vaccinated child, we should consider that case as nearly decisive in Dr Thomson's favour; and, on his principles, we should expect such a case to occur frequently. And, on the other hand, if several examples shall occur, in each of which an eruption, pronounced, in consequence of its appearance in its early stage, to be chicken-pox, shall manifestly give rise to several other eruptions, all of them preserving in their early stage the same characters; if these eruptions shall appear to affect equally persons who have gone through cow-pox, or small pox, or neither; and, more particularly, if these eruptions shall, in every instance, be equally mild, and their progress equally short, in the wholly unprotected as in the two other classes of persons, we should consider even a

few such examples as furnishing very strong evidence against him.

Now, we are assured that this last supposition has already been realized in Edinburgh; Mr Bryce and Dr Abercrombie having in all, since these inquiries were commenced, either seen themselves, or received from practitioners on whose observation of the marks of distinction above noticed they can rely, accounts of *nine* different families, where an eruptive disease appeared, the first case of which was pronounced from its appearance in its early stage to be chicken-pox. In each of these families several other cases followed, all of which presented the same characters in their early stages. In several of the families persons who had gone through small-pox, as well as persons who had gone through cow-pox, were affected; and in each of the families the eruption appeared in one unprotected child, presented the same characters, and ran the same course; its appearance being equally peculiar, and its duration equally short.

On the supposition of the contagion in these cases being that of chicken-pox, essentially different from small-pox, all this was to be expected, and all corresponded to the predictions which were hazarded on that supposition; but on the supposition that the contagion was the same as that of small-pox, let us consider how many anomalies are here involved.

It will not be denied that the characters given by Mr Bryce and Dr Abercrombie of chicken-pox in its early stage differ materially from the usual, if not from the only, appearance of unequivocal small-pox in that stage. In each of these families, however, *all* the eruptions presented these characters, so that, on this supposition, the contagion of small-pox gave rise to above forty anomalous cases, without one case answering, in its early progress, to the ordinary descriptions of small-pox.

But, if it must appear very singular that so many exceptions to the general rule should occur in succession, without a single example of the rule itself, it must appear much more singular, that the same cases should present *nine* instances of the contagion of small-pox producing, in an unprotected person, merely a mild, short, and vesicular disease, *without one* of its producing its ordinary effect. The whole series of these cases, therefore, on this supposition, appears to be a succession of anomalies; and if we suppose them to be cases of small-pox, we must suppose them to be all exceptions to the common effects of that contagion, both on protected and unprotected persons.

We think it must be admitted, that if a few more similar series of cases shall occur, they will be sufficient to constitute an

experimentum crucis in favour of the notion of a separate contagion.

We may add that the decision of this question will depend upon observations, in regard to which there can fortunately be no mistake. For although there may be misapprehension as to the particular characters of the early stage of any particular eruption, there is no room for mistake as to these two points; *first*, That a particular eruption is pronounced, by Mr Bryce or Dr Abercrombie, to be chicken-pox; and *secondly*, That the contagion of that eruption gives rise, in an unprotected child, to a disease equally mild, and equally short, as in a vaccinated child. And if these two things happen several times more, we think the evidence in favour of the opinion of these gentlemen will be satisfactory.

The circumstances already stated seem to be sufficient tests, whereby future observers may judge, whether eruptions corresponding to the descriptions we have quoted of chicken-pox, are specifically distinct from small-pox or not. Mr Bryce and Dr Abercrombie have, however, attempted to establish two other tests of the same kind. 1st, That it is extremely difficult, if not impossible, to propagate this kind of eruption by inoculation; and 2dly, That cow-pox runs its regular course after this disease, but not after small-pox. Both these tests have been applied to the cases which we have just reported on the authority of these gentlemen, and the results have been what we have just stated, and have, therefore, greatly multiplied the anomalies which these cases must present, if regarded in the light in which Dr Thomson regards them.

On the first of these points Mr Bryce states, that he had seen thirteen persons inoculated with matter taken from the vesicles of what he judged from the marks above stated to be chicken-pox, "with the greatest care at all periods of the disease, and at all seasons of the year," but in none of them was any eruptive disease introduced. Dr Alison's letter to Mr Bryce contains an account of three more inoculations from children, whose disease was conceived by Mr Bryce to be chicken-pox, of which the result was the same.

To this Dr Thomson answers, that if it be really a property of chicken-pox not to be communicable by inoculation, the disease must differ from that described by Heberden, Dimsdale, and others, under the name of chicken-pox, and which was believed by Heberden, and particularly stated by Dimsdale, to be communicable in this way. This observation, however, is not decisive, because in the time of these authors it was not known, that the contagion of true small-pox may produce a modified

disease in those who have previously had small-pox, and may sometimes produce a merely vesicular disease in those who have not; and therefore, the inoculations supposed to have been with matter of chicken-pox, and which do not seem to have been numerous, may really have been with the matter of mild or modified small-pox.

Secondly, Dr Thomson refers to experiments made by several of our contemporaries, from which it would appear, that chicken-pox has sometimes been communicated by inoculation, although the attempt has often failed. These experiments are detailed from p. 96 to 114 of the present volume. On reviewing them, it does not appear to us, that they are so conclusive in favour of Dr Thomson as he seems to think them. The cases related by M. Freteaux, (p. 97,) by M. Valentine, (p. 99,) and that related as having occurred at Paris in 1802, (p. 101,) are all decidedly favourable to the supposition, that chicken-pox *cannot* be communicated by inoculation. The case most strongly adverse to that supposition is the second case quoted from Dr Willan, (p. 98,) where successive inoculations of chicken-pox and small-pox are stated to have produced successive eruptions; yet, as only three days are stated to have elapsed between the periods of appearance of the two eruptions, this example does not seem free from fallacy. In the other cases quoted, we should apprehend the matter used for inoculation to have been taken from modified small-pox, and therefore that they prove, not that the chicken-pox of Mr Bryce and Dr Abercrombie, in certain circumstances, can be communicated by inoculation, but merely that the modified small-pox in certain circumstances cannot, and in this they all agree very well with the account of the result of inoculations with undoubted modified small-pox given by Dr Adam, and quoted here, (p. 103,) and also with previous inoculations with variolous matter stated by Dr Willan. *

In other instances, as in the instance of the children inoculated from Dr Hennen's son, inoculations with the matter of modified small-pox have been more uniformly effective; but a variety in the results given by this matter proves nothing, in regard to the effect of inoculating with the matter of the chicken-pox of Mr Bryce, unless it were previously proved that the two diseases are the same.

In support of their *second* assertion, that a child who has gone through the disease which they call chicken-pox, afterwards goes through cow-pox regularly, Mr Bryce and Dr Abercrom-

* On Vaccination, p. 32, 45.

bie mention particularly two cases, which had occurred in their own practice, and which they had very carefully watched, (p. 66.) In Dr Alison's letter to Mr Bryce, there is an account of two more, but, as in one of these the areola formed on the fourth day of the eruption of what was called chicken-pox, this case should, perhaps, be overlooked. To these, however, we can add three more; the very young child already mentioned, which was exposed to the contagion of several of the cases in Jamaica Street, (p. 164,) and took the disease in the mildest form, has been since vaccinated, and gone through the cow-pox quite regularly, according to the opinion of both Dr Thomson and Mr Bryce. Another unprotected child, a patient of Mr W. Wood's, lately recovered from a disease which he had pronounced, judging from the marks described by Mr Bryce, to be chicken-pox, and which had affected, in precisely the same manner, two persons of the family who had gone through small-pox, and three who had gone through cow-pox, has since gone through the vaccine process quite regularly; and Archibald Hastie, whose case is stated at p. 178 of Dr Thomson's work, and was regarded by Dr Alison as answering to Mr Bryce's character of chicken-pox, has also been vaccinated, and gone through the cow-pox quite regularly, in the opinion of several medical gentlemen who saw him, among whom was Dr Abercrombie. This case is particularly important, as Dr Thomson seems, from his account of it, and particularly of the pits left by it, (all of which, however, have since disappeared,) to have considered it as approaching more nearly to the small-pox than to the chicken-pox of authors. *

To the argument drawn from these facts, Dr Thomson answers, 1st, That cow-pox sometimes advances regularly after true small-pox. This, however, is allowed to be a very rare occurrence, particularly at so short a distance of time after that disease, and therefore, very unlikely to take place six or seven times in immediate succession, as was the case in the instances above quoted. 2dly, What seems to us a better argument, he answers, that although small-pox in its regular form may prevent cow-pox in future from running its natural course,

* It must be added here, that Mrs Campbell, who seemed to take the disease in July last, from Hastie, (see p. 179 of Dr Thomson's book,) has been lately vaccinated, and has not gone through the process regularly, the vesicles excited having been very small, and the areola premature and insufficient; there was reason to think, however, that the vesicles had been checked in their progress by rubbing, and, besides, the evidence of her not having gone through small-pox previously, is not satisfactory.

yet, when the contagion of small-pox produces only a short and chiefly vesicular disease, it may not afford protection against cow-pox. And in a letter addressed to Dr Thomson, by his friend Mr Turner, mention is made of two cases, in which the contagion of unequivocal small-pox had produced only a mild vesicular eruption, and in which subsequent vaccination had been pronounced quite regular. p. 300.

This point, therefore, demands farther investigation. We have lately seen the vaccination of a child in these circumstances, of which the result was the reverse of what Mr Turner had observed. The object of this experiment was precisely in the predicament of Anne Cairns, whose case is given above, having been exposed to the infection of regular small-pox, and taken only a mild papular and vesicular eruption, which formed into crusts in five days. This child has since been twice vaccinated by several punctures without any farther effect than a slight inflammation, about the 4th day, around the punctures, which quickly subsided.

Dr Thomson has shewn much ingenuity in thus controverting the conclusions drawn from the two classes of facts just considered, and has certainly, in some degree, neutralized the evidence which they afford. Yet we think they still furnish a presumption against his opinion; and if the results of future experiments shall be similar to those recorded in the letter of Mr Bryce, we think that presumption may yet become a certainty.

In conducting similar experiments in future, however, it must be remembered, that the two classes of experiment are very different. The vaccination of a child which has gone through an eruption, of which the nature is uncertain, is not only safe but always advisable, whereas the inoculation of an unprotected child, with the matter of a doubtful eruption, is an experiment which, for obvious moral considerations, ought never to be tried, unless we have the strongest evidence that the disease which we attempt to communicate in this way is equally mild in the unprotected as in the vaccinated.

We shall conclude this long article with stating what has always seemed to us a strong argument against Dr Thomson's notion of the identity of small-pox and chicken-pox. This is founded on the simple fact, that before vaccination was known, chicken-pox was always represented as a disease possessing these two remarkable properties, 1st, That it affected equally those who had, and those who had not gone through small-pox; and, 2dly, That it was equally mild in both. Hence, we must suppose, on Dr Thomson's hypothesis, that the descriptions given of chicken-pox must have been taken from small-pox occurring epidemi-

cally with these two peculiarities; 1st, It must have been very mild; and, 2dly, It must have frequently attacked those who had gone through it before. Now, it appears that secondary small-pox, whether in a regular or modified form, has been rare even during this epidemic; and Dr Thomson himself expresses an opinion that, in milder epidemics, it will be much rarer. It is, therefore, inconsistent with all that we know of the disease, from observations made on it in its unequivocal form, to suppose that it can at once be uniformly mild in the unprotected, and common in those who have gone through it before.

On the whole, as it is allowed on all hands that the modified small-pox is a mild, a short, and in most cases, throughout the greater part of its progress, a truly *vesicular disease*, it is not at all surprising that the introduction of modified small-pox should have brought confusion and obscurity on the marks of distinction, formerly thought to be established between small-pox and chicken-pox; but we have as yet seen nothing, either in the epidemic we have witnessed, or in the statements contained in the present volume, to compel us to have recourse to the supposition that the distinction itself was founded on mistake.

We trust it is unnecessary for us to apologize for the freedom of these remarks on Dr Thomson's very ingenious work. If the opinion which he here maintains shall ultimately be found correct, he will readily forgive an opposition which will contribute, perhaps, to draw the attention of the profession to the question, and accelerate the investigation of the truth: and if, on the other hand, satisfactory marks of distinction between small-pox and chicken-pox shall be found to exist, we are sure that nothing will have done so much to establish their existence, and demonstrate their importance, as his candid and ingenuous avowal, that hitherto he has been unable to discover them; and the ingenious explanation he has attempted of all the phenomena in question, on the supposition that no such distinction exists.

II.

A Series of Engravings representing the Bones of the Human Skeleton, with the Skeletons of some of the Lower Animals. By Edward Mitchell, Engraver, Edinburgh. The Ex-

planatory References by JOHN BARCLAY, M. D. Lecturer on Anatomy, Fellow of the Royal College of Physicians, and of the Royal Society of Edinburgh, &c. &c. Part I. & II. Edinburgh, 1820.

Cephalogenesis sive Capitis Ossei Structura, Formatio et Significatio per omnes Animalium Classes, Familias, Genera ac aetates Digesta, atque Tabulis Illustrata, legesque simul Psychologiae, Cranioscopiae ac Physiognomiae inde Derivatae. Autore JOANNE BAPTISTA SPIX, Medicinae et Philosophiae Doctore, Membro Academiae Scientiarum Monacensis Ordinario. Regiique Musei Zoologici et Zootomici Conservatore. Accedunt Tabulae XVIII. Munich, 1815. Folio. Pp. 72.

Anatome Testudinis Europaeae. Indagavit, depinxit, Commentatus est LUDOVICUS HENRICUS BOJANUS, Medicin. et Chirurg. Doctor, in Universitate Caesarea Vilnensi Veterinar. Medicin. et Anatom. Compar. Professor Publ. &c. &c. Wilna, 1819. Folio. Pp. 74.

A BOOK of plates, the value of which consists so entirely in the manual execution, affords but little scope for our critical animadversions. We should, however, be doing an injustice to a meritorious artist, and would deprive ourselves of much gratification, were we to omit this early opportunity of expressing our sense of Mr Mitchell's merits in the work before us. The subject he has chosen, the delineation of the osseous system, is, of all the divisions and subdivisions of anatomical study, perhaps the most capable of being illustrated by engravings. The tuberosities, processes, depressions, and foramina of the bones, which are so necessary to be impressed upon the mind of the young anatomist, admit of accurate representation by the art of the engraver, and give to this fundamental branch of anatomy a stability and permanence of character, which, being totally independent of the art of colouring, and altogether unsuited to the display of fancy, may be conveyed with much effect through the medium of good plates. It is, perhaps, to an opinion, such as we have now expressed, that we are indebted for the elegant engravings of the human bones by Albinus, by Cheselden, and by Sue, which Mr Mitchell has copied with so much accuracy and success.

The eminent individuals we have just named were, no doubt,

aware that much correct and useful information respecting the bones was capable of being conveyed by engravings, of the aid of which the soft parts are certainly less susceptible. We have, indeed, figures of the muscles by Albinus and others, which are much admired for their accuracy, but, at the same time, exhibit a stiffness foreign to the nature of muscle, although perfectly characteristic of bone. Were the original works above alluded to, to be had upon reasonable terms, or were they even procurable upon any terms, we should have hesitated to recommend a copy; but as these have long ago disappeared from the shops of the booksellers, and are only to be seen in public libraries, or on the shelves of virtuosi, we consider the rising generation of anatomical students as greatly indebted to Mr Mitchell, for having brought within their reach at a moderate expence, all the information which these celebrated originals are intended to convey.

A book of anatomical plates, patronized and illustrated by Dr Barclay, is a phenomenon which we cannot pass without notice; and we consider it no small proof of the merits of Mr Mitchell's work, that he has been enabled to procure the aid of this distinguished anatomist in furnishing the letter-press. We now see, as it were by contrast, the force of Dr Barclay's objections to plates representing arteries and other parts variable in size and distribution, while, in the present instance, we see him encouraging and aiding in the execution of a work in which plates are applied to what he considers their more legitimate object; he admits that they may serve to "elucidate verbal descriptions, assist the fancy in forming its conceptions, and the memory in recalling past recollections, when the originals are imperfectly remembered, or cannot be procured;" and we fully agree with him in observing, that all engravings are to be considered "merely as auxiliaries; and, for that reason, are never to be called to interpret for Nature where Nature is at hand to interpret for herself."

In the letter-press explanatory of Mr Mitchell's engravings, Dr B. has contrived to introduce many interesting and some original remarks. In the preface he has given his reasons for recommending Mr Mitchell to copy the tables of Albinus and Sue in preference to attempting a work from original drawings; and with these reasons we are satisfied. He has also paid a just tribute to the unrivalled osteology of Monro, in assigning his own reasons for declining to attempt a new description of the bones.

In the explanation of Plate XIX. we have the following observations on the course of the medullary artery of the ulna.

"The course of this artery," says Dr B., "and the corresponding arteries of the radius, is recurrent, while the course of the medullary artery in the humerus is progressive. This difference in the course of these arteries has never been satisfactorily explained; and what adds to the difficulty of the explanation is, that the course is different in the corresponding bones of the atlantal and sacral extremities. In the humerus progressive; in the femur recurrent; in the radius and ulna recurrent; and in the tibia and fibula progressive. It, indeed, has been observed, that, in a standing or a sitting posture, the position of the humerus, tibia, and fibula, where the course is progressive, is somewhat perpendicular to the horizon, while that of the femur, radius, and ulna, where the course is recurrent, is rather more in a parallel direction. But these temporary positions will not account for the course of the arteries, as that course had received its direction before we were born, and before we were capable of sitting or standing. If the course, therefore, is to be referred to any positions, it should be to those which the bones had while they were in utero. As a means of remembering the particular course in these several bones, it may be observed, that it is progressive in the three bones which are inflected, dorsad, or backwards, and recurrent in the three which are inflected sternad, or forwards. Aristotle, I think, was the first who remarked that, beginning from the trunk, the successive inflections of the bones which correspond in the atlantal and sacral extremities are in opposite directions; the humerus bending backwards, the femur forwards, the radius and ulna forwards, and the tibia and fibula backwards; and that inflections in the same extremity are found to be alternately backwards and forwards, or forwards and backwards. Comparative anatomy, so far as I know, has not been consulted to any extent with a view to throw light upon the course of these medullary arteries. So far as my inquiries have led me, I have met with nothing on which reason or judgment can repose with confidence. In referring it to a position of the bones while they were in utero, I naturally thought of the veins and arteries which are ramified on the testicles, and which have their origin as high as the kidneys, where the testicles had lain previous to birth."

In the explanatory remarks attached to Plate XXXII., which represents the male, the female, and the fœtal skeletons, Dr Barclay shews, that most of the characters which Soemmering has attributed to the female skeleton, are still more remarkably characteristic of that of the fœtus, and that, in the progress from youth to maturity and old age, the female skeleton differs less than that of the male, from the original characters which they both possessed in the fœtal state. He then goes on as follows:

"After these remarks on the forms and structures of the human skeleton, which relate to the differences of age and sex, I have only to add, that certain forms of the face and head, different from any

that are known to occur in the male, the female, or the fœtal skeleton, are, as Camper has shewn, regularly observed in those sculptured figures, which the ancients formed to represent their imaginary deities. In the singular design of these uncommon artificial forms, it evidently appears, that the artists had something more in their view than the mere difference of what Camper has denominated the facial angle. The part called the face has many resemblances to that of the fœtus, and, therefore, is found proportionably small, compared with the part which is named the cranium. The two jaws seem also to be formed like those of the fœtus, as if destined to hold only twenty teeth, instead of thirty-two, but at the same time with such a depth and quantity of bone as are only to be found in the full vigour and meridian of life; the forehead, too, as well as the jaws, presents a combination equally uncommon; a fœtal form of the frontal bone, with two sinuses and a glabella proportionally elevated; a combination that leads to a feature which, to the eye of the anatomist, is strikingly peculiar; a nose, raised from the small receding bones of the face, to the same elevation as the glabella, a nose of such size, prominence, and strength, as irresistibly to suggest an idea very different from what we are apt to form in looking at the small, the slightly prominent, and the feeble nose continued from the flat glabella of the fœtus. By methods such as these, the effects certainly of much previous observation and reflection, the ancient sculptors, by artificial, yet harmonious combinations of those characters which indicate youth, with those which express the vigour of manhood, and the dignity of age, and by carefully excluding whatever implied debility in the one, or decay in the other, have produced forms which, though not natural, are admirably calculated to dazzle the eye, to captivate the fancy, and engage the feelings, before the judgment, which is tardy in its processes, has time to operate. Besides, these forms were not intended to be those merely of ordinary men, for, though meant to be human, they were also meant to be something more,—the representations of heroes or of gods, of whom men were supposed to be resemblances; though resemblances as unlike as an ape is to a man."

The field of comparative osteology, the study of which Mr Mitchell's talents appear so well qualified to facilitate, is a subject which, in this country at least, has hitherto been but little indebted to the art of engraving. If we except the anatomy of the Horse by Stubbs, there is scarcely any thing in this department which has been produced in England worth notice. The rude representation of the bones of the Elephant by Blair, in which, by the bye, the two scapulæ are transposed, that of the right side being placed on the left, and *vice versa*, while six toes are placed on the fore foot and four on the hind; * the im-

* Osteographia Elephantina, or a full and exact description of all the Bones

perfect figure of this animal in the Elephantographia Curiosa D. Georgii Christophori Petri ab Hartenfels, published in 1715; and even the more recent and finished view by the celebrated Cuvier,* are thrown far into the shade by the splendid representation of the skeleton of the Elephant annexed to Mr Mitchell's work, as a specimen of a third fasciculus which he proposes to publish. From the engraving before us, we have formed a very high opinion of the talents of Mr Greville, from whose drawing this view is taken, and of the accuracy of the subject from which he had to copy, we entertain no doubt. It represents an oblique view of the stupendous skeleton, which occupies so conspicuous a place in Dr Barclay's museum. This Elephant, which was one of those employed by the East India Company, for the purpose of transporting camp equipage and military stores, having become unserviceable from disease of the lungs, was exposed to public sale, and was purchased by Dr Ballingall, now of this city, who, with his own hand, killed it by pricking it in the spinal marrow, and after cleaning the bones, transmitted them to this country, having previously taken the admeasurements of the cartilages necessary to assist him in the correct articulation of the skeleton.† The representations of

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of an Elephant which died near Dundee, April 27, 1706, &c. By Patrick Blair, M. D., F. R. S. This is a work highly creditable to Dr Blair, considering the period at which it was written, but the plate which accompanies it is singularly defective in the points we have mentioned. These defects have not escaped the notice of Cuvier.

* Recherches sur les ossemens fossiles de Quadrupedes, &c. Par M. Cuvier. Paris, 1812.

† We have the pleasure of laying before our readers a copy of the original memoir sent home by Dr Ballingall, along with the skeleton of this elephant.

On the 18th of April, 1813, I purchased, for two pagodas, (about 16 shillings sterling,) an unserviceable female elephant, and after riding her out to the side of a tank about two miles from the cantonment of Bangalore, the animal was killed in the following manner. A piece of an old regimental sword blade having been fixed in a wooden handle, was driven into the spinal marrow, between the occipital bone and the atlas. This was effected by one blow of a small tent mallet, the elephant having been previously made to lie down, and the feet and trunk having been secured by strong ropes and iron chains. I then proceeded, assisted by Lieutenant M'Gregor of the Royals, to dissect this animal, separating the different joints, and afterwards boiling them to remove the flesh from the bones, in which we were occupied for three days, assisted by sixteen chucklers or native shoemakers, who are the people generally employed in India for flaying animals and other purposes of this kind. From the heat of the climate, it was impossible to make any deliberate dissection of this enormous creature; a few particulars, however, are worthy of being noted, as some of them are to be attended to in the articulation of the skeleton. The

the skeletons of the Scolopax gallinago, the Motacilla rubecula, and Perca fluviatilis, are in no degree inferior, either in point of beauty or accuracy, to the view of the elephant; and, by having selected animals, which, in point of size, approach towards the extremes of the animal kingdom, Mr Greville and Mr Mitchell have shewn us how admirably qualified they are to do justice to all the intermediate gradations. We shall now close our observations on Mr Mitchell's book, by congratulating ourselves on having amongst us an artist so capable of doing justice to anatomical subjects, and by expressing a hope, that he will meet with sufficient encouragement to prosecute the subsequent part of his work.

In the splendid work of Dr Spix, of which we can only present our readers with a brief and imperfect sketch, we have a most important contribution to the subject of comparative anatomy, and feel disposed to appreciate very highly every thing which can tend to render this study more captivating and

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trunk, an organ of such various utility to the elephant, consists of a flexible tube, divided by a partition into two separate canals, and composed of an intertexture of fleshy fibres, resembling the structure of the tongue. Externally it is covered with a skin much finer than in other parts of the body, and studded with papillæ or tubercles, and is lined internally with a fine vascular membrane.

On opening the thorax of this subject, the lungs were found to contain a large quantity of purulent matter, in several separate abscesses. This was what rendered the animal unfit for further service, having been what is commonly called broken-winded.

The diaphragm, on its lower or abdominal surface, presented a large expansion of beautiful shining tendon. In the cavity of the abdomen, not less than fifteen or twenty gallons of serum were contained; all the viscera, however, in this cavity seemed perfectly sound. A large inter-articular cartilage, more than a quarter of an inch thick, was placed between the condyle of the lower jaw and the temporal bone. The intervertebral cartilages of the cervical vertebræ were nearly three-eighths of an inch thick. The intervertebral cartilages of the back and loins were from one-half to five-eighths of an inch in thickness. This being a female, the tusks are comparatively small, and of no value as articles of commerce. It will be observed that one of the molares is partly destroyed by caries, which is probably not an uncommon disease in this animal. I have seen in the possession of Captain Jones, assistant commissary general, a carious tooth of an elephant, which was extracted in the following singular manner. The keeper having made a noose in one end of a rope, passed it round the decayed root of the tooth, and fixed the other end to the root of a tree; the animal, which was lying down during this operation, was now made to rise up, and the tooth was by this means extracted.

The subject of the present memoir differs in two remarkable points from the description of Cuvier, there being only 19 instead of 20 dorsal vertebræ, and of course only 19 ribs of a side; and the tibia and fibula, instead of being anchylosed throughout their whole extent, stand considerably apart, so far, in proportion, I think, as in the human subject.

more popular. We are by no means satisfied with the attention which it has met with in England, and a bare enumeration of the authors referred to by Dr Spix, will shew how far we have been outstripped in this department by the continental writers. Amidst the penury of works on this branch of study in our native language, we are persuaded that the interests of the profession would be advanced by translations of many of the continental authors whom we could point out. We know no works more captivating to young men who enter with liberal and philosophic views into the study of their profession, than M'Cartney's translation of Cuvier, and Laurence's Blumenbach, and, indeed, we are convinced, that it is to these very books our present class of anatomical students are indebted for nine-tenths of all the information they possess on comparative anatomy. The study has always appeared to ourselves a most interesting one, and in addition to its more immediate bearing on the physiology and pathology of our domestic animals, its utility in illustrating the obscure functions of the human system has long ago been pointed out.

"Experimental philosophy is highly advanced by the frequent dissections of the body of man and other animals, which I have performed with all care and fidelity, that I might inspect the great secrets of nature, and declare the works of the allwise and omnipotent Protoplast, who hath made all things in number, weight and measure."—"And I humbly conceive the greatuse of comparative anatomy is, to illustrate the structure, actions, and uses of man's body, which are sometimes more clear in that of other animals than in ours; as I have discovered in frequent dissections to my great satisfaction, pleasure, and admiration, whereupon I procured my worthy friend Mr Faithorne, an excellent artificer, (if not the best in the world in this kind,) to engrave the open parts of the body and brain of man, and other animals designed from the life." *

What improvements have been made in the art of anatomical engraving since the days of Dr Collins, and his worthy friend Mr Faithorne, an inspection of the works before us is well calculated to evince. But to return to Dr Spix; our author divides his work into three sections, De Capite Osseo, De Psychologia, and De Cranioscopia et Physiognomia. The cranium he considers as consisting of three vertebræ, and designates them thus, vertebra

* A Syteme of Anatomy, treating of the Body of Man, Beasts, Birds, Fish, Insects, and Plants, by Samuel Collins, Doctor in Physic, &c. &c. London, 1685, 2 vols. folio.

anterior, sive tertia, sive cranio-cephalica, sive frontalis; vertebra media, sive secunda, sive thoracico-cephalica, sive parietalis, vertebra posterior, sive prima, sive abdominali-cephalica, sive occipitalis. These vertebræ are again considered as composed like the spinal vertebræ, of a body, transverse, and spinous processes. The primary subdivisions of the cranium into anterior, middle, and posterior vertebræ, are again compared (as is indicated by their names) to the three great cavities of the body; the venters of ancient writers; the face, which is considered as the extremity of the cranium, is subdivided into pars suprema, sive extremitas vertebræ frontalis; pars media, sive extremitas vertebræ parietalis, and pars infima, sive extremitas vertebræ occipitalis. An analogy is then traced, with much ingenuity and considerable success, between the two last subdivisions of the face, and corresponding parts in the thoracic and abdominal, or atlantal and sacral extremities. With regard to the number of distinct bones composing the cranium, our author considers this as being nearly the same in man and the inferior animals; several of the parts, however, in the human head, becoming consolidated into one bone at an early period of life, while, in many of the inferior animals, they remain distinct "usque ad mortem." With regard to the os incisivum, which has been a *bone of contention* amongst anatomists, and which has been supposed to furnish a specific distinction between man and the animals which most nearly resemble him, our author entertains no doubt of its existence in the human embryo at an early period. He has seen it also in adults, and mentions the skull of a hydrocephalic subject in his possession, in which the left intermaxillary bone is separated by a considerable space from the remainder of the jaw; Meckel he informs us found the os incisivum again subdivided, and each of the dentes incisores possessing a distinct bone for its socket.

From the list of writers enumerated by the author, who have treated on the structure of the ear in the amphibia, we should have expected that little would have remained for investigation on this subject; there appear, however, to be several points upon which these authors are still at issue. Dr Spix agrees with Monro in affirming the existence of the meatus externus in cartilaginous fishes, which is denied by Camper, Scarpa, and Cuvier. We have some interesting observations on the progress of ossification in the different bones of the human embryo; and are referred to a work, "Nonnulla de incremento ossium embryonum in primis graviditatis temporibus," published at Halle in 1802, by Senff, whom our author characterizes as "præ omnibus in examinandis embryonibus solers." These observations are followed by remarking that the organs of

seeing and hearing, which he considers as the more noble senses, vary their position in the cranium as we descend in the scale of being from man downwards, and that in proportion as the site of these organs recedes upwards and backwards, the nose and jaws, the seats of the more ignoble senses of smell and taste, advance forwards and become more prominent. In man we find the lower jaw articulated near the middle of the cranium, while, as we descend in the scale of animated nature, this joint is thrown backwards to the very extremity of the occiput. We have also some excellent remarks on the variation, in point of size and position, of the different foramina and fissures for the transmission of the nerves and blood-vessels in the crania of different animals. Our author then proceeds to point out the different admeasurements of the head, proposed by Daubenton, Camper, and Blumenbach; and recommends some new admeasurements for ascertaining the relative proportion between the cranium, properly so called, and that part of the head destined for the organs of the senses.

This subject cannot well be explained without the aid of figures, and we cannot afford time at present to enlarge upon the variation that exists in the basifacial angle, from the heads of the Grecian divinities and heroes, down to the Carib and the monkey. The contrast is sufficiently striking, and did not escape our immortal dramatist, who appears to have anticipated one of the principal points in modern craniology, and to have been perfectly aware of the flatness of the forehead as characteristic of inferiority.

> "I will have none on't; we shall lose our time,
> And will be turned to barnacles or to apes,
> *With foreheads villanous low.*" *

In the course of the work we have the analogy already referred to, between certain portions of the face and corresponding parts of the atlantal and sacral extremities, traced to the very nails of the fingers, to which the teeth are considered as the analogous parts in the facial extremity; and among other singular analogies with which this work abounds, the human head is compared to the globe which we inhabit, and the sutures are made to represent the boundary lines between the frigid, the temperate, and the torrid zones of the human skull.

In the second section of Dr Spix's book De Psychologia, we have many interesting observations; his views, however, in this

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* Tempest, Act IV. Scene 1.

part of the work, do not strike us as being characterized by the same originality which he displays in the first. It gives us pleasure to observe, that his doctrine of psychology is not obtruded upon us in the same reprehensible form which we had so lately occasion to notice, as emanating from a Professor of the Royal College of Surgeons of London.

Our author, in his third section De Cranioscopia, accuses Gall of having borrowed the whole of his system from Lavater, and this accusation he supports with considerable force. He admits Gall's merit in the investigation and explanation of the structure of the brain, while he utterly denies, that his system of cranioscopy is either supported by science or experience.

The plates, which form an essential part of this work, represent the heads of a variety of animals, both in their entire and divided state, so as admirably to illustrate the various positions of the author; plate 9th, representing the heads of several fishes, is particularly calculated to give us a most favourable impression both of the anatomist and the engraver. The whole of the figures are engraved in stone by Koeck, and afford by far the most useful specimen we have seen of this new art, which appears to have been brought to great perfection at Munich. * Upon the whole, Dr Spix's work, amidst numerous displays of a powerful conception and vivid imagination, contains much novel, accurate, and highly interesting observation. The author, we understand, has lately proceeded on a scientific mission to South America, where an ample field for prosecuting the study of comparative anatomy is open to him, and we sincerely wish him health to cultivate it.

The anatomy of the tortoise by Bojanus need not detain us long. It consists of seventeen very neatly executed tables in copperplate, representing the skeleton, muscles, and viscera of this animal, accompanied with copious explanations. It affords, upon the whole, another very favourable specimen of the industry of the German school; industry which, in the cases of Drs Spix and Bojanus, has been turned to infinitely better account than that of their learned countryman, who set himself to reckon the number of hairs in a square inch of human scalp.

We conclude by again expressing our surprise, that the study

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* We are happy to find that a Lithographic Society has lately been formed in this city, containing several distinguished names in the list of its members. We have seen some specimens of this modern art executed by Mr Ruthven, the ingenious inventor of the portable printing-press, which, considered as his first attempt, do him much credit, and we expect soon to be able to form a correct estimate of the comparative merits of stone and copperplate engraving.

of comparative anatomy, which is the true foundation of all rational physiology,—which in its collateral relations embraces the scientific treatment of the disorders incident to the horse, the ox, and the dog,—and which is thus calculated to interest the first and noblest characters in the land, should have been left so totally destitute of public encouragement in this country. It ought to be the province of some of our enlightened public bodies, to bestow upon this study such efficient patronage as will insure its more general cultivation, and form a class of practitioners qualified to rescue the practice of veterinary medicine from the rude and untutored hands in which, with few exceptions, it is still to be found. Dr Barclay, to whom we have already had frequent occasion to allude, has for some years past given a short course of comparative anatomy in Edinburgh during the summer season, and has done all that his well known zeal and industry can accomplish, to extend the knowledge of this science; but until we see it aided by public approbation, and looked upon in another light, than as a mere appendage to a medical education, which a student may either cultivate or disregard at his pleasure, we shall despair of seeing any steady progress made in the knowledge of that branch of medicine, in which the warrior, the sportsman, and the farmer, are so directly interested.

III.

A Treatise on the Operations for the formation of an Artificial Pupil; in which the Morbid States of the Eye requiring them are considered, and the Mode of performing the Operation adapted to each peculiar case, fully explained; with an Account of the Opinions and Practice of the different Foreign and British Authors who have written on the subject. With two Copperplates. By G. J. Guthrie, Member of the Royal College of Surgeons, &c. 8vo. pp. 209. Longman and Co., London, 1819.

Mr Guthrie is already known to our readers as an army surgeon of high rank, and author of an excellent work on Gunshot Wounds and Amputation, of which we had occasion to form a very favourable opinion, as expressed in our Review for

April 1816. He now comes before us as a public teacher, and surgeon to an institution for a class of diseases, which has of late excited the greatest interest among all ranks of medical men, and among not a few extra-professional persons.

The history of ophthalmic surgery in England might afford us much scope, both for detail and speculation, but we shall rather defer entering into it, until we come to examine the second part of Mr Guthrie's work, on Iritis and Cataract, now in the press. We shall at present confine ourselves to giving the plan of that part of the work before us, which, although avowedly meant for the author's hearers, and indispensably necessary for them, we would strongly recommend to the attentive perusal of all classes of readers; for we do not know any English publication which contains, in so small a space, so much information on the artificial pupil, or which so effectually obviates that necessity of possessing several works on the same subject which has hitherto existed, "merely," as Mr Guthrie observes in his preface, "because each author has chosen to recommend only his own practice or methods of operating,"—to which we would add, "and has made it a point to decry the methods of every other person." We have here no controversial disquisitions—no exclusive pretensions—none of those multiform and plausible disguises in which quackery delights; indeed, we were prepossessed in favour of our author when we read his preface, in which he disclaims these things; and our prepossessions were confirmed on perusing the work itself, where we found, according to his promise, that when Mr Guthrie thought it right to combat the opinions of either the living or the dead, he did so with liberality, stating the facts fairly on both sides, and then drawing his own inferences from them; but above all, he has given "to every one his own," a species of literary honesty not very punctiliously observed by medical writers in general, but shamefully neglected by those who have felt it of importance to their interests to treat on the diseases of the eye,—so much so, indeed, that were restitution to the right owners rigorously enforced, some of those gentlemen would be lamentably shorn of their beams, and left with little more than their pompous title-pages, and their fulsome dedications, to present to their "polite and noble" patrons. It is truly gratifying, however, to see what advances are now making in this country to rescue from the hands of empiricism this interesting department of the profession.

Mr Guthrie's work commences by enumerating the four successful, and the two doubtful methods of forming an artificial pupil, with reference to the different authors who have treated

on them. He then gives a history of their operations from Cheselden downwards. The six methods to which he refers are, 1st, Division of the iris, either through the sclerotic or an opening in the cornea. 2d, Excision of the iris. 3d, Laceration of the iris. 4th, Separation and excision combined. These are the successful methods. The hitherto unsuccessful methods are, 1st, Removing a portion of the sclerotic and choroid coats, close to the cornea, where that part is palpably opaque, so as to allow the rays of light to pass into the eye, as proposed by Autenrieth; and 2d, Separation and division of the iris, through the same opening in the sclerotica, the method of Donegana.

The classification of the different states of the eye requiring the operation for artificial pupil is very well arranged, and very comprehensive, and on each of the divisions and subdivisions the author treats at length. The following is his classification.

" *Classification of the states of the eye requiring the operation for the formation of an artificial pupil.*

" The morbid affections of the eye, which render it expedient to perform an operation, in order to produce an artificial pupil for the transmission of the rays of light to the retina, though many and various, may nevertheless, for the sake of arrangement, be comprehended under three general classes, namely—

" 1st, Those morbid states of the eye which depend on derangement of the structure and function of the iris, or of the crystalline lens and its capsule, the anterior chamber of the aqueous humour preserving its natural dimensions, the central part of the cornea remaining transparent.

" 2d, Those morbid states of the eye which depend on derangement of the structure of the cornea, the anterior chamber being nearly or quite natural in its dimensions, the iris, the crystalline lens and its capsule being healthy.

" 3d, Those morbid states of the eye which depend on any combination of the two preceding states of disease, or with a diminution of the anterior chamber of the aqueous humour.

" *In the first class are included—*

" *a.* Those cases in which closure of the pupil has taken place, in a greater or less degree, after the operations of depression, reclination, extraction, or by division of the crystalline lens, with or without the formation of an adventitious membrane, or deposition of coagulable lymph. The capsule having been destroyed or not.

" *b.* All cases of false cataract, of whatever description, wherein the lens, or its capsule, adhere to the posterior part of the iris, with diminution of the area of the pupil. The principal cause being inflammation of the iris, whether simple or dependent on general de-

rangement of health, syphilis, or rheumatism, the iris being more or less of its natural colour and structure, but plane on its anterior surface.

"*In the second class are included*—

"*a.* Those cases in which the cornea is rendered partially opaque (leucoma) in consequence of ulceration, operation, or other cause, preventing the transmission of light, or impeding it so much as to render vision indistinct; but in which the anterior chamber, the lens and its capsule, remain unimpaired.

"*In the third class are included the following cases*—

"*a.* A slight attachment of the iris, drawing the natural pupil to one side, with diminution of its size, the lens and capsule being transparent, the cornea opaque at the point of attachment.

"*b.* The same with opacity of the lens and capsule.

"*c.* When the iris is convex, but not adhering to a transparent cornea, the pupil nearly closed, the pupillary edge of the iris firmly adherent, the anterior chamber considerably diminished, or nearly destroyed.

"*d.* The state *c* combined with opacity of the cornea, and attachment of the iris, including the natural pupil.

"*e.* The state *d* combined with a staphyloma of the cornea, in a greater or less degree, the lens being present, or having been removed.

"*f.* Either or all of the three last varieties of disease, combined with central opacity of the cornea, so dense and large as to leave only a narrow transparent ring, the aqueous humour not being entirely wanting.

"*g.* The states included in *f*, the iris in contact with the cornea, a segment of a narrow ring at the edge being alone transparent, and the anterior chamber obliterated.

"*h.* Other anomalous states, not included in the above, but requiring some modification in the mode of operating." pp. 87—89.

It would be doing neither justice to the author, nor performing our duty to our readers, did we attempt a continuous abstract or an analysis, which the nature of Mr Guthrie's book does not admit of, for it is itself analytical; its style is as condensed as it can be consistent with perspicuity, and any attempt to make it more so would tend to obscure it. But, that we may not fail in giving some idea of the matter, we select some detached observations which appear to us eminently indicative of good sense and moderation, and which, in addition to our previous knowledge of that eminent surgeon, convince us that Mr Guthrie has not only skill to execute his operations, but judgment and discretion in selecting the proper time for performing them,—which we hold to be a matter of fully more importance.

"When an artificial pupil cannot be made in the centre of the iris,

(from whatever cause,) the other parts of it are eligible in the following order. 1st, The inferior part of the iris inclining inwards. 2d, The internal, a little below the transverse diameter of the eye. 3d, The inferior and external. The upper part being the least eligible, from the eyelid covering that portion of the cornea in the natural state of the eye. The lower and inferior parts of the iris are to be preferred for the following reasons; because the line of vision being through that part, the eye is less removed from its natural axis, and consequently less squinting is occasioned than when vision is performed in any other direction; and, if both eyes are operated upon, the axes of vision are made more nearly parallel; and a decided preference of a position, not higher than the centre of the iris, is founded upon the natural position of by far the greater number of objects of vision, which it is essential for a person to see, being viewed forwards or downwards. In general, however, the selection of the place, in which the iris is to be perforated, depends more on the transparency of the cornea than upon the choice of the operator.

"It may be useful to remark, that a small artificial pupil at the lower part is infinitely more valuable than a large one at any other, which, in the natural state of the eye, is covered by the lid, or much out of the axis of vision. If the pupil be made quite on the nasal side of the eye, the field of vision is less extensive in proportion as it is distant from the inferior margin of the cornea; and, although this objection cannot be urged against the pupil made towards the temporal side, still there is a defect frequently observed, if the pupil be small, and near the ciliarly margin of the iris, from the patient's turning the eye a little inwards, to allow the rays of light to fall more on the central part of the retina; and this is even accompanied, in some instances, by a corresponding motion of the head, when the person is desirous of submitting any thing to an accurate inspection.

"If the state of the cornea will permit of it, a sound part of the iris should be selected in preference to that which is apparently unhealthy; for the iris, when sound, seldom bleeds, and it is not liable to inflammation when injured, or divided with a cutting instrument; in its natural condition, indeed, it has but little sensibility, and is therefore not very susceptible of pain, but with an unhealthy iris, we find the reverse to be the case; when wounded, it bleeds copiously, is prone to inflammation, which terminates not unfrequently in suppuration, or the deposition of lymph: and it is manifest, that the occurrence of either may eventually destroy the eye, or render the operation unavailing, by filling up the aperture made to serve as a pupil, with a deposition of lymph, or even by the formation of an adventitious membrane behind it.

"The central part of the iris frequently appears unsound, whilst it is more healthy at its outer or inner margin, in which case one of these places should be selected for the operation, notwithstanding the rule which has been stated.

"The external and internal margins of the iris, immediately on a

line with the transverse diameter, or equator of the eye, are particularly unfavourable for the operation of separating the iris from the ciliary ligament, (Coredialysis,) on account of the long ciliary arteries entering at these parts, and causing, by their division, a greater hæmorrhage, and frequently a higher degree of inflammation than would otherwise occur; which dangers are augmented by the more firm attachment of the iris at this part, and the greater force necessarily employed for its separation.

"The operation for artificial pupil should not be recommended where one eye is sound; for, as the axis, as well as the power of vision, will be different, it is likely, in most instances, to be prejudicial rather than serviceable; and especially if the lens be in any way implicated, for it will confuse the sight of the sound eye, and, by making the patient squint, give rise to greater personal deformity and inconvenience than it was intended to rectify. If the lens and capsule be perfectly transparent, and the pupil can be made at the inferior and internal part of the iris, observing an axis parallel to that of the sound eye, no inconvenience may perhaps ensue, as has frequently been observed to be the case, where the pupil has been drawn a little to one side, in consequence of a slight attachment of the iris to the cornea. But an exception of this kind does not invalidate the general rule of not performing an operation on one eye, whilst the other remains entire.

"It is a question of some moment to decide whether the operation ought to be performed, or not, in those cases wherein vision has been totally lost in one eye, and materially impaired in the other; and the decision ought to rest with the patient, rather than with the surgeon, even where the prognosis is favourable; for, if the patient still enjoys sufficient power of vision to enable him to guide himself, the surgeon would be more than hardy who could put that portion of the faculty of sight in jeopardy, by attempting an operation which may fail in the best hands. In such circumstances the operation should not be attempted upon any grounds, unless the case is so simple as to require only an opening in the cornea, and the removal of a portion of the iris for the purpose of enlarging the natural pupil. If the patient cannot see sufficiently well to guide himself, the conditions are very essentially altered: since an unsuccessful operation involves the loss of very little, whereas much is to be gained by the successful issue of it. Where opacities in the centre of the cornea occasion the impediment to vision, it is prudent to dilate the pupil beyond the edge of the opacity, by the daily application of the belladonna, which may possibly enlarge the sphere of vision, so as to supersede, in a doubtful or dangerous case, the necessity of an operation.

"I am perfectly aware that, in many cases of this kind, an operation may be followed by the most brilliant success; but it is not to be denied, that total blindness has been produced by this operation, in many instances; simple, therefore, as it may appear, it ought not to be practised without the free concurrence of the patient, un-

biassed by the language of authority, founded solely upon a fair and true statement of all he has to hope for, or to apprehend from its consequences." pp. 79—83.

Two very neatly executed plates illustrate this publication. It is dedicated to the Vice Presidents of the Royal Westminster Infirmary, for the Cure of Diseases of the Eye, among whom we perceive many distinguished officers of the army, navy, and ordnance, and some of the highest medical characters of this country. His Royal Highness the Duke of York, Commander in Chief of the Army, is Patron of the Institution, and the Duke of Wellington, President. The medical officers are, Dr Charles Forbes, Physician, and Mr Guthrie, Surgeon. They have our warmest wishes for the success of their honourable and disinterested undertaking, and this first production of their school gives the strongest assurance of their meriting it.

IV.

A Sketch (Analytical) of the History and Cure of Contagious Fever. By Robert Jackson, M. D. London, 1819. 8vo. pp. 284.

This is the excellent work of an excellent man; another contribution added to the many which have been bestowed from the same pen on medical science. Its venerable author is, we understand, pursuing the vocation of his long and well spent life, in exploring the sources of the pestilential epidemic which lately raged at Cadiz, and if he lives to return to us, we may look for further illustrations from him of the nature and causes of Fever. But our business is with the book before us, to give any thing like a detailed account of which would require much more than another volume of the same size, so various are the views, so profound the researches, and critically nice the distinctions, which he draws between the various shades of fever, as modified and complicated by diversity of the causes, and still more of the circumstances under which the subject has happened to be exposed. It is in fact a text-book, the greater part of which teems with speculations and views of contagious fever, which, though peculiar in a great degree to the author himself, are always philosophic.

The First Chapter is divided into five sections, and contains a summary of the history of contagious fever, as it occurred on the different services where he was employed with the British army from the beginning of the French Revolutionary War. In section 1st we have a most interesting sketch of the health of the 3d regiment or Buffs, previous to, and after embarking to join the grand army in Flanders in the year 1794, and of that army itself after the 3d became a part of it. It ought to be read by every one who wishes to obtain a correct knowledge of the phenomena of fever, or who feels interested in preserving the lives of our brave soldiers, and preventing a recurrence of the same shocking mismanagement which consigned them to the grave by thousands, during that disastrous campaign. The miserable effects of crowding multitudes into those hot-beds of contagion called General Hospitals, is most feelingly pourtrayed. The precise relative proportion of deaths is not exactly known, but it was enormous, probably a third of the infantry. So virulent it seems was the artificial infection, that it actually superseded the natural endemic fever of the country, which under other circumstances could not have failed to predominate among so great a body of strangers; and so purely was the contagion the offspring of mismanagement in the formation and establishment of the greater body of the army, that the cavalry, where more pains had been taken in the selection of recruits, and where the regiments, being mostly the older corps, contained the most experienced regimental officers, remained almost entirely free from it, during the whole time their comrades of the infantry were suffering so severely. The practice of the author does not seem at that time to have been fully developed, for few, indeed, have courage to open their eyes at once to the monstrous errors of established systems, which they have been early taught to hold in reverence.

The 2d section contains a description of an healthy detached armament amongst whom no contagion existed, where the troops, to prevent desertion, were congregated on a bare unsheltered island in the Cove of Cork, without any kind of hospital accommodation, in the autumn of 1795. The origin of typhus fever, the endemic of the British Isles, amongst them, is thus naturally accounted for.

"The weather, usually wet, damp, and drizzling, on the west coast of Ireland, at this season of the year, was boisterous and stormy in the year 1795, particularly in the months of October and November. The tents, in which the soldiers lived, were often blown down by the violence of the winds; and as rains generally accompanied the higher winds, the soldier was frequently wet to the skin; and,

while wet by descending rain, he was chilled and benumbed by the damp and bare ground, or the damp and rotten straw on which he was obliged to lie." p. 50.

The troops were to have sailed at the beginning of October, but the ships that were to transport them to St Domingo did not arrive till the end of November, and then adverse winds and other delays detained them, under the above circumstances, until the 9th of February. Embarkations of the troops who had become surcharged with contagion from the causes already mentioned, and disembarkation when the transports became so pestilential as to be uninhabitable, filled up the intermediate time, and in this way the contagion grew so inveterate, that it adhered to some of the ships throughout the whole voyage, and until their arrival in the West Indies,—a rare and uncommon circumstance, for typhoid contagion is almost infallibly dissipated by navigating towards the tropical seas. The principle which directed the practice at Spike Island, was stimulation in one form or other. Mercury, as recommended by Dr Chisholm, was also employed, but our author cannot bear a very favourable testimony to its effects. On arrival in the West Indies, his remedies were cold affusion, emetics, purgatives, blisters to the forehead, calomel, camphor, &c. &c. and occasionally blood-letting. But it was not until a later period that he overcame, as he informs us, the prejudice which was then so common against abstraction of blood in those fevers which arise from a source of personal contagion. We lament that our limits will not allow us to follow Dr Jackson, in his history of the health of the Russian auxiliary troops in the islands of the Channel, an account of which forms the subject of his 3d section.

The 4th section gives a history of the contagion that must ever be incidental to the wretched mode of recruiting our armies by *contract*, which was in vogue at the beginning of the present century. His fifth section contains "summary remarks on the character of the contagious fever, which appeared in the British army at its return from Spain, in the beginning of the year 1809." Its original causes were as nearly as possible those which befall all exhausted armies, that are obliged to suffer severe military service in inclement seasons, and the concentration and aggravation of the disease, were much promoted by the circumstances of an hurried and distressful embarkation in the face of the enemy after the battle of Corunna; its highly contagious nature was clearly demonstrated by its effects on the healthy crews of the ships of war that conveyed the troops during a very short passage to England. The disease was purely artificial in its source, and so

contagious and fatal, as to destroy one in four of the troops affected, one in seven of the medical staff in attendance, and a still greater proportion of the hospital servants. The results show, that no successful mode of practice was discovered or pursued.

Dr Jackson dedicates his Second Chapter to a short but affecting, and we cannot help adding a disgusting, exposure of the system by which our armies were recruited at the beginning of the revolutionary war. It is not a fit subject for medical criticism here, and we shall therefore pass on to the Third Chapter, where we find the author in the new capacity of a physician in private practice.

The description of fever in civil life cannot present the strong decided features of the purely artificial disease, that is generated in armies amongst masses of men,—of men, too, in the vigour of life, often under the highest circumstances of excitement. It is not, therefore, to this part of the work we would refer our readers for striking illustrations of the phenomena of contagious fever, but his remarks on the nature of epidemic and contagious agency, of their connection, their lapses into one another, and their separation according to peculiar states of the atmosphere, are both original and valuable; they come from the pen of a medical philosopher of no mean estimation, and as such ought to be read by all who take an interest in the promotion of medical science.

The Fourth Chapter, which is divided into five sections, gives a particular history of the jail or hospital fever, that purely artificial disease, which is excited by an animal poison, produced from undue accumulation of human effluvia; and here the author's views are both minute and profound, though in some places they are also complicated to a degree that is embarrassing, and are further obscured by a peculiar phraseology, which he has employed all his life, and which it would be most unreasonable in us now to expect that he will change. This part of the book, as we found it the most difficult to unravel, is the one we liked the least. It must positively be studied by our readers, and if they will bestow upon it the necessary time and attention, we can assure them that their labour will not be lost. The author, we believe, has seen more of this disease in all its varieties, than any other physician probably now in existence, and he has evidently contemplated and studied what he has seen, till the picture became impressed upon his mind in the strongest features of reality and truth. Its very intensity, under these circumstances, may have prevented him from communicating what he felt, in language that could be followed with ease by the generality of readers.

In the practical part, to which we come in Chapter IX. after three intermediate chapters on Dissection, Diagnosis, and Comparative Mortality, (the two last most particularly worthy of attention,) we feel ourselves more on a level with him. He begins the chapter by exposing the error and its consequences of presuming the action of contagious fever to be sedative, and on that ground trying to supersede or overcome it by stimulating remedies. He effectually combats the idea of inflammation being an *essential* attribute of contagious fevers, and, after some reasonings on the proximate causes of fever, concludes, that the cutaneous expansions are the direct seat of the disease, and hence the mainspring of the cure is made to rest on the impression made by warm and cold bathing, combined with frictions on the skin, but as these are to be combined, indeed, simultaneously used along with emetics, venesection, purgatives, diaphoretics, and blisters, we cannot bring ourselves to believe, that bathing practised in that manner can be a remedy of essential importance, or that, if the skin were duly purified, the patient would not do as well without such a bath, as with it. There might, besides, be something revolting to the feelings of many, in being exposed to dashes of cold water, after having been long immersed in a hot bath, and been additionally exhausted by loss of blood. In fact, all remedies in fever can be remedies of circumstance only. Blood-letting most certainly is not murder, as it was long represented to be; no more is it cure, though it is a most excellent prescription in many violent cases when properly applied at the beginning of the disorder; but when our author, without specifying the period of the disease, tells us, as he does at page 255, that the lancet should be used as initiative of movement in channels that are obstructed by congestion, we cannot agree with him, nor even allow that it is a remedy applicable to the generality of contagious fevers, though it may be useful in many, probably even the majority.

We are the more in earnest in entering this caveat, from the just fear of so excellent an auxiliary remedy being abused by indiscriminate application, when its certain consequent discredit must be the result, and ridicule and prejudice may again be excited to take the lancet entirely out of our hands. Such, at least, was the practice of the French faculty during the greater part of the last century, and such was the effect of the ridicule of Le Sage in pourtraying a Sangrado.

We confess, that, from universal conviction of their fallacy, we have little confidence in any system or plan of cure that can be laid down for fevers, and are satisfied that much

mischief must ever accrue from any attempt to treat every case with remedies of the same class. He, therefore, will stand the best chance of being a safe and a saving practitioner, who has studied all systems, but is wedded to none, who "nullius addictus jurare in verba magistri," approaches the sick bed, with the resolution to act according to the circumstances of the patient before him; to combat the symptom of danger as it arises, rather than attempt the counteraction of a proximate cause, which never has been, and in all probability never will be, understood.

As we said at the beginning, we trust that this is not the last time we are to meet in the field of criticism this veteran sage, who has been at so much pains to instruct us. A life, already extended beyond the ordinary mortal span, has been devoted by him to the furtherance of science and humanity. While on the field of duty he has ever been one of the most active and exemplary of the ministers of good works, and when he retired to his closet from the busy scenes of public service, his pen has always been employed to perpetuate the precepts of which his life has been the example. Can there be to our profession a more gratifying spectacle, one more worthy to be styled heroic, than to see a man so gifted, dedicate the best portion of his days to the noble purpose of exploring through unwholesome climes, amidst labour and danger, the hidden recesses of disease, with the sole view of benefiting his fellow creatures? Like others, he might in those climates have cried contagion, and stopped short on the very threshold of investigation, but such a course suits not the active philanthropic mind. At such a man we can scarcely bring ourselves to laugh, even when he seriously tells us, as he does at page 245, that cobwebs in some cases possess power superior to opium, and in his other works, that they are a remedy of efficacy in the endemic fevers of the tropics. It is better, however, to laugh than to weep, but with the chastening reflection ever before us, that there are few, even of the wisest, who have not fancies as eccentric as this; that they are even characteristic, not unfrequently of true genius; and that the giving to the world even under the risk of ridicule, whatever is conscientiously believed to be true, bespeaks an honest ingenuous mind that ought to command our respect.

It is gratifying to think that length of days has been accorded to Dr Jackson, as if for the express purpose of letting him see the triumph of those principles which it was the pride of his life to inculcate. For these he has suffered revilement and persecution, and no man, only a few years ago, stood a better chance of ex-

periencing the common fate of all who attempt to benefit mankind by exposing established systems of error. Contumely and hatred were dealt out to him in full measure, but the applauses and approbation for so good a work, which are ordinarily withheld till the grave has closed upon their object, have arrived while he yet walks amongst us, to cheer his latter days.

V.

The Philosophy of Domestic Economy; as exemplified in the mode of Warming, Ventilating, Washing, Drying, and Cooking, and in various arrangements contributing to the Comfort and Convenience of Domestic Life, adopted in the Derbyshire General Infirmary, and more recently, on a greatly extended scale, in several other Public Buildings newly erected in this Country; together with an Explanation of the Principles on which they are performed. The whole illustrated by numerous Engravings by W. Lowry. By Charles Sylvester, Engineer. Nottingham, Barnet, and London, Longman & Co., 1819. 4to, pp. 62, with Ten Plates.

The Infirmary at Derby has been spoken of in such terms of approbation, that we have long wished for a description of it; and Mr Sylvester, the editor of the present volume, has fortunately every qualification for this task, his skill as a chemist and engineer being well known to the public, and his residence at Derby having afforded him the best opportunities of appreciating the value of the contrivances which he describes: it is, however, to *William Strutt*, Esq., of Derby, that the inventions which distinguish this establishment are primarily due, and they certainly reflect the highest credit on the philanthropy and perseverance, as well as the ingenuity of that gentleman. The volume before us is valuable, likewise, in a more extended view, since it illustrates several principles of great importance to the comfort and convenience of domestic life, which, if well understood, are calculated to assist materially the measures of the practitioner in medicine, or, what is still better, to prevent the occurrence of disease. It is not possible, without the assistance of plates, to lay before our readers a detailed account of the edifice now under our consideration, but we shall endeavour

to give a general notion of its principal peculiarities in structure and arrangement, referring for minuter particulars to the volume itself, which is enriched with engravings from the hands of Mr Lowry. *

The Infirmary was built or begun during the year 1807. The committee appointed to manage the erection of it had advertised for plans, but none of those sent in were adopted, and the committee themselves at last undertook the task of forming a plan, and caused a model to be prepared accordingly, upon a large scale, which was found of great use during the progress of the work. The conditions pointed out by the advertisements were, that the building should be of stone, that it should contain fever wards, having a separate entrance, as far removed from the principal entrance as possible; that there should be convenient access to every side of the building; that the fever wards should contain twelve beds, and the whole eighty beds at least; and that, besides the usual conveniences of an hospital, it should have two day rooms for convalescent patients.

"The site of the Infirmary is on the south side of the town of Derby, at a short distance from the London road, and the building, from its elegance and magnitude, and the great taste with which its grounds are laid out, has rendered that entrance into the town particularly striking and agreeable. It consists of three stories, the basement story being a little sunk and surrounded by an area, and the middle or principal floor being somewhat elevated, and approached by steps and a portico, supported by four Doric pillars."

The base of the whole approaches to a square, and the edifice itself is nearly of a cubical form, the staircase to the upper story, and a spacious hall, being in the middle of the building. The roof of this central part is drawn up into a conical form, terminating in a dome, containing several windows which completely illuminate the hall, and within it is also an outlet for the escape of foul air, provided with a turncap, and communicating, by means of flues, with every apartment appropriated to the patients. The roof of the surrounding rooms is separated from that of the centre, and, to obviate the evils arising from snow and ice, the gutter which surrounds the

* The letters of reference to the plates are in some instances erroneous or wholly omitted; and we could have wished that the dimensions of the different apartments, as well as *scales* to the plans of apparatus, &c. had been inserted. These may still be added, even without a new edition of the letter-press. The height also of the different stories should be stated.

central part is covered with slates, elevated by wooden slips about two inches square, with a sufficient space also between the ends of the slates, for the water of the melted snow to drain off, an expedient which is found effectually to obviate the necessity of removing the snow.

The first or basement story contains the kitchen, laundry, cold and warm baths, with various domestic offices, and a stove-room on a peculiar construction, by which the whole edifice is supplied with warm air; a steam-engine of two horse power, with a very large boiler, and two spacious public baths, adjoining the vestibule. The second floor is devoted principally to the officers and servants of the establishment; but contains also two wards for sick persons, and six apartments for the reception of fever patients, which, with the corresponding portion of the upper story, are detached from the rest of the building, and have a separate entrance at the back, so as to render the fever department completely insulated. The upper story is devoted exclusively to patients; containing, besides general wards, two large rooms for convalescents, eight smaller apartments, appropriated to acute cases, and an operation room, with two adjoining wards for patients after operation.

The chief peculiarities by which this excellent institution is distinguished are, 1. The arrangements for warming and ventilating the building. 2. The warm-baths. 3. Various contrivances connected with the kitchen. 4. The apparatus for washing, and the laundry. 5. The water-closets.

1. The author's account of the ventilating and warming apparatus is premised by some observations on the general principles of what may be called, in the strictest sense, Domestic Economy; and there are likewise valuable remarks, in other parts of the volume, upon this important subject. He mentions, with just honour, as having taken the lead in this department of inquiry, the names of Franklin and Count Rumford; and complains, with apparent justice, of the great deficiency of architects in general in this department of the knowledge connected with their profession. He gives judicious directions as to the structure of houses, and the choice of situation; and states the superiority of brick over all other materials, as possessing greater durability as well as other advantages. But he dwells with particular approbation on the construction of buildings rendered fire-proof by the substitution of iron for wood; and mentions several examples of large buildings so constructed: among others a mill, erected in 1792, by Mr Strutt of Derby, which was originally 115 feet long by 30 wide, and six stories high, and has since been much enlarged.

"This subject," he adds, "has hitherto received so small a share of attention, that it is probable the historians of the next century may instance our building houses that may be burnt down, as a proof of our little progress in civilization, just as we now do the practice of former times, when houses were warmed by making fires in the middle of the rooms. Were the Derbyshire Infirmary now to be erected, it would probably be done without any wood being used in its construction, and without even iron pillars and beams." p. 8. —"The greatest defect, however, in the construction of dwelling-houses, public buildings, and manufactories, is observable, not so much in the materials of which they are constructed, as in the means of warming and ventilating them. Notwithstanding the boasted comforts of an Englishman's fireside, we see it accompanied with evils which loudly call for remedy. The common construction of fire-places, and the means of admitting air into the rooms, is quite sufficient to convince us that these principles have never been investigated in a philosophical point of view. When a house is built, a tunnel is made from each room, for the escape of smoke and vapour, the greatest part of which ought to be consumed. This is also a channel for the escape of the air of the room, which cannot be replaced, but by the cold air from the atmosphere; for the entrance of which no provision is made, except by the accidental crevices formed by the shrinking of the wood, forming the doors and windows. The evils resulting from these defects are, *first*, those sitting before a good fire are scorched on one side, and chilled by the cold air on the other: *secondly*, the cold air entering the chimney, without passing through the fire, destroys its draughts, and renders the combustion of the fuel so imperfect, that a considerable portion passes away unburned, or comes into the room in the form of smoke, producing the greatest domestic evil. That which goes out of the top of the chimney annoys the neighbourhood; and that which adheres to its sides would soon entirely stop the chimney-funnel, if not removed by means, in the greatest degree degrading to human nature." pp. 8, 9.

The usual structure of kitchens is characterized by the author as equally preposterous and unappropriate; and the mode in which clothes are commonly washed and prepared for use is not less susceptible of improvement. The main objection to all the methods of heating generally in use is, that the *radiant* heat alone is taken advantage of; and the remedy is to render the air itself the vehicle of warmth, a point on which this volume contains a great deal of useful disquisition. It is justly remarked, that a supply of fresh air is necessary to warm-blooded animals, for the purpose of equalizing their temperature as well as for respiration; and the author points out forcibly the advantage to be derived from the steady temperature of the

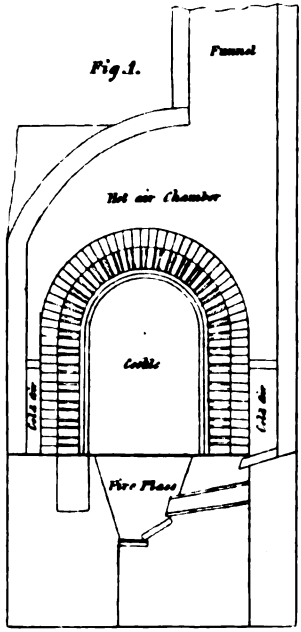
earth itself, in securing this great source of health and domestic comfort.

"At a very little depth below the surface in all countries, the earth is of the average temperature of the climate, as may be ascertained by the temperature of springs. It will hence appear, that, if the air which is requisite to supply a house in the winter of cold countries, were made to pass along a subterraneous cavity, it would become considerably warmed. It has been found by experiment, that a passage of 200 feet in length has had the effect of warming the air of the atmosphere passing through it, to much above the arithmetical mean, between the outer air and that of the earth. Such a provision, aided by the power of two turncaps, (as will presently be shown,) would be the means of increasing the comfort of dwellings in countries where severe long winters are experienced, and the same advantages would apply to the cooling of apartments in hot countries. The air, which is sometimes heated to 100°, might easily be cooled down to 80°, by passing through a tunnel at a considerable depth." pp. 56-7.

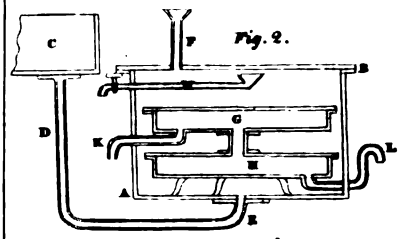
The warm air stoves in the Derbyshire Infirmary, and the system of flues for ventilation and heating, connected with them, are constructed on a principle invented by Mr Strutt in the year 1792, and brought to the test of experience by repeated trials in other buildings, before its application to this institution. The structure of the stove, we think, is admirable. It occupies a small room in the basement story of the building, and is supplied with air from below, by a subterraneous channel or culvert communicating with the open air by means of a turncap, the opening of which is always turned towards the wind by a vane; while the turncap on the summit of the building, which may be considered as the opposite extremity of the ventilating tubes, has a contrary direction given to it by similar means. The cold air flue, in the Derbyshire Infirmary, is about four feet square,* its length seventy yards, and when the thermometer in the shade in the outer air stood at 80°; the current, after passing through the flue, was found, where it entered the stove-room, to be 60°, and was of sufficient force to blow out a lighted candle.

The stove, which we shall now briefly describe, is placed near the centre of the building, immediately over the orifice of the

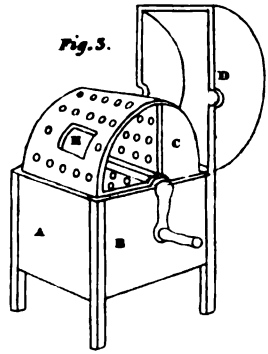
* The section of this flue should be such, as to present the greatest possible internal surface, and should, therefore, be "a long parallelogram, the length at least three times the breadth," and for a corresponding reason, the section of the *hot* air flue should be a circle. Cold air flues should be made of the best conductors of heat, and those for hot air of the worst.



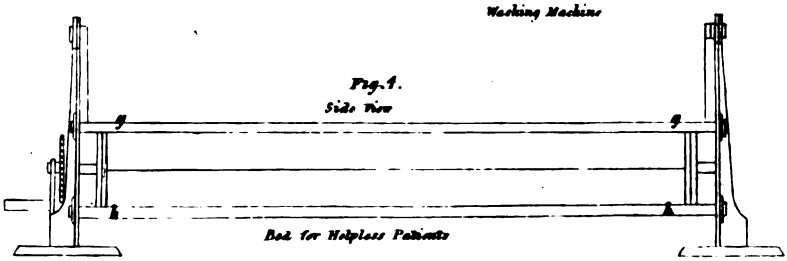
Hot air Stove



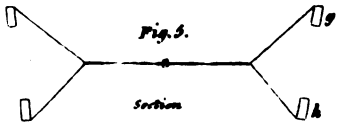
Warm Water Vessel

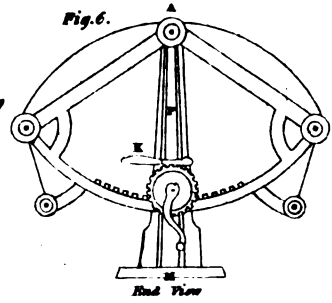


Washing Machine



Bed for Helpless Patients





E. M'Kahe. sc

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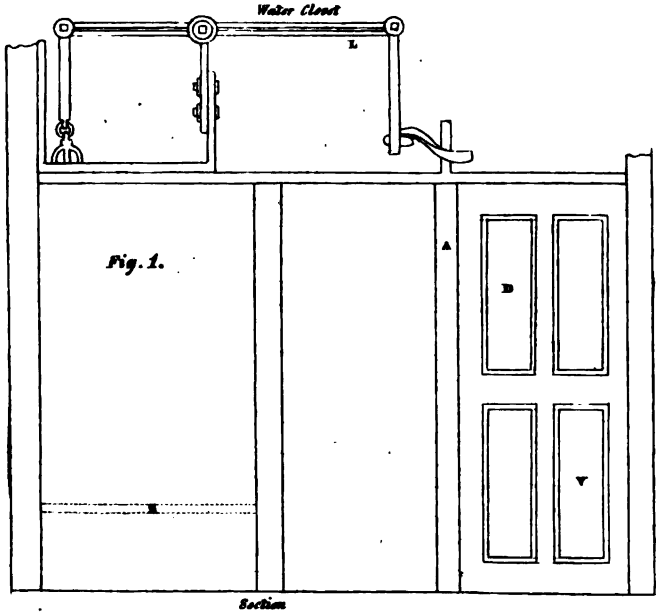

Fig. 1.

Section

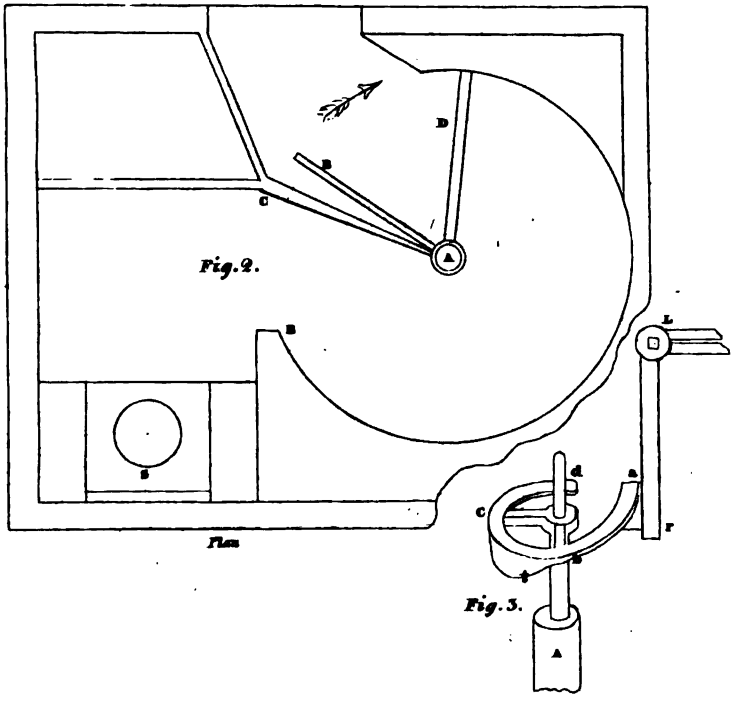

Fig. 2.

Plan

Fig. 3.

R. Mitchell fe.

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culvert. The detail of its construction requires the illustration of plates; but the section (Plate I. fig. 1.) will probably render its more prominent features sufficiently intelligible. Immediately above the fire-place, there is a hollow cockle, or receiver, made of iron and of large capacity, within which the smoke and vapour of the fuel circulate, before they escape downwards into the chimney. This cockle is surrounded on the outside, at the distance of eight inches, with a casing of brick traversed by numerous openings, each of which is provided with a tube of sheet iron or earthenware, reaching to within three-fourths of an inch of the iron cockle, and serving to bring the outer air into closer contact with its heated surface; * from whence it is conveyed to a large air chamber above, and thence, by an appropriate system of flues, vertical and horizontal, to all parts of the building. The horizontal flues are formed of slates, closely jointed with cement at the corners and ends:—If the flues are to be under ground, and horizontal, they ought to be double, with a space for air between, but if vertical, rolled iron will answer very well. The openings of the flues into the apartments are all provided with registers, which are moveable only by means of a key kept apart for that purpose. The middle story of the building is also traversed vertically, by two funnels, (besides the main flue leading from the warm air stove,) one of which commences on this middle floor, with a sliding door which may be opened to different degrees, and terminates in one of the horizontal hot air flues in the story above. This allows the escape of any excess of hot air not required in the uppermost story, and prevents the stoppage of the current of air which otherwise would very soon allow the cockle to become red hot, and thus to be rapidly destroyed by oxidation. The second funnel opens also at its bottom, in the middle story, and terminating in the roof, ensures the complete ventilation of the hall.

In this arrangement, it is essential that the stove should be placed considerably below the rooms to be warmed, since the author states the velocity of the heated air to be as its temperature, and as the square root of the height; from 15 to 20, or even 30 feet, he considers as desirable, reckoning from the bottom of the air chamber upwards.

Mr Sylvester mentions, as a remarkable fact in the history

* These tubes form a more important part of the contrivance than might at first be imagined. The addition of tubes to a stove, in which, at first, there were only square openings in the partition surrounding the cockle, was found to produce double the effect, from the same quantity of fuel.

of this invention, that, although it had been used in the cotton-mills of Messrs Strutt and Company, as early as 1792, it never was noticed in any publication. He describes also portable stoves on the same principle, which must be very convenient in private houses, and refers to the Pauper Lunatic Asylum at Wakefield, * the new gaol at Maidstone, the North Staffordshire Infirmary, and the Nottingham Lunatic Asylum, as exemplifying, on a large scale, the success of the plan, although, in some of these instances, the omission of proper flues, in the original construction of the buildings, has prevented its complete efficacy. The church of Leek, in Staffordshire, affords an example of its successful application to places of public worship.

Subjoined to this account is a comparative statement of the effects of the warm air stove, and of those produced by steam, as a vehicle of heat; the facts upon the latter subject are taken from the work of Mr Buchanan, and the author deduces from his calculations, that, with equal quantities of fuel, the stove has the advantage, in the proportion of more than six to one. This great superiority, arising in part from the difference between the specific heat of air and water, but principally, perhaps, from the much greater loss of temperature in the conveyance of steam than in that of warm air, and the great quantity of heat, which, of necessity, passes off in the hot water, and in uncondensed steam.

2. *The Baths.*—Besides the baths on a small scale, for the use of the patients in the Infirmary, there are, as already stated, two of large dimensions, situate near the main entrance of the building, and accessible to the public; which produce a considerable revenue to the charity. They are both warmed by steam, and are kept constantly, one at a temperature of 84°, the other at 92°. The extent of each is an area of 162 square feet at the bottom, and the content is 810 cubic feet, or 4860 gallons of water. A small stream of cold water is constantly running into them during the day, and they are heated by means of a steam pipe, one inch in diameter, from the boiler of the steam-engine, which terminates in a larger pipe of cast-iron four inches in diameter, carried quite round the bottom of the bath, and concealed in a recess of the wall, which is covered by

* In this institution, "when the stoves are in full action, the air, on the average, moves with the velocity of five feet in a second: the area of each of the main flues is 12 feet, which gives 120 cubic feet for the quantity which passes through the house in every second, and, supposing the whole cubic contents to be 400,000 cubic feet, the whole of the air will be changed in a little less than every hour." p. 59.

a perforated stone plinth, so contrived as to allow the water to circulate freely all round the steam pipe. The sides of the baths are coated with glazed tiles; and wood being inadmissible, from the constant dampness of the place, the doors are formed of very large slates, the jambs of wood plated with copper, and the window frames of iron faced with copper. The price charged for a single bath is only 2s., or 20s. for 20 tickets, transferable to members of the same family.

"If one of these baths were filled to the depth of five feet in water at 32°, and were required to be raised to the temperature of 96°, it would demand for that purpose 304 gallons of water in the form of steam, which will consume about 50 lbs. of Newcastle coal. This mass of water, if the door be kept closed, would cool in the course of 24 hours about 4°, and would require, to keep up the temperature, a daily supply of coal a little exceeding three pounds. If this water were entirely to be changed once in 14 days, by a given adjutage of the outlet and inlet, then the annual consumption of coal would be one ton; supposing the bath to be kept constantly up at 96° and the water to be supplied at 32°; but as this is less than the average temperature, this estimate will be quite sufficient. These are facts derived from experiments, by observing the times of cooling. The calculation for the fuel is taken from the economy of Bolton and Watt's steam-engines." p. 7.

The baths for the patients are likewise heated by steam, and there are two in the basement story, in distant quarters of the building, and one upon the upper floor. This facility of access to the warm baths, and the ease with which they are heated, we regard as points of considerable practical importance; for in most of the Infirmaries with which we are acquainted, the distance between the wards and the warm baths exposes the patient to injury from cold during the passage to them; and in many instances, the water is heated with so much difficulty and expence, as to render the frequent use of the hot bath extremely inconvenient.

The *Steam-engine*, the boiler of which affords the steam for the baths, is employed to work a forcing pump, by which a cistern at the top of the building is supplied with water; it gives motion also to a shaft communicating with the wash-house, which turns the washing machine. The engine is of one horse power, but the boiler of a size adapted to an engine of six horse power, in order to furnish steam in sufficient quantity for the baths, the kitchen, wash-house, and laundry, &c.

3. *The Kitchen, Cooking Apparatus, and Scullery*, are also furnished with some very ingenious contrivances. The general plan is the same with that of Count Rumford, and the detail

consists of stew-hearths, two roasters, one of which is an oven for bread, and a steaming apparatus of a new construction. The roaster also is in part new, the fire having no immediate action on the bottom of the oven, but the flame is made to pass over the sides back and top, and is taken off below, so that the bottom, usually the hottest part, is in this comparatively cool, and a current of hot air is forced to traverse the interior of the roaster, so as to carry off the disagreeable smell, and to give the brown colour of roasted meat to the surface. The *scullery* adjacent to the kitchen contains three boilers heated by steam, two of them occasionally used for making soup, the other solely for preparing milk porridge; the milk being heated by a current of steam introduced into it, and regulated by a stopcock with a graduated scale and index. The temperature is by this method never quite so high as 212°, but this is found sufficient to effect the union of the oatmeal with the milk, and is freed from the risk of burning, which produces "the odour under which the porridge is said to be *bishoped*." There is also in the scullery a vessel that furnishes a constant supply of warm water, an article of the first necessity in the management of the sick, and its construction is so ingenious, that we shall describe it in detail, according to the latest improvements of Mr Strutt, the inventor. AB (Figure 2, Plate I.) is a section of a cylindrical vessel of cast-iron, 24 inches in diameter, and 14 inches deep within; C is a reservoir of cold water, the bottom of which is higher than the top of the cylinder, and which is connected with the latter, by the open tube DE. From the top of the cylinder, a pipe F is carried, as high as the top of the reservoir, terminating in a funnel, to obviate the effects of undulation, the cylinder being thus rendered as it were a part of the reservoir, will be always full, so long as any water remains in the latter. Within the cylinder AB are two smaller cast-iron cylinders, G and H, each two inches deep, and separated by means of the pipe I, to the distance of two inches, the lowermost being supported on three legs. The pipe K connects the internal cylinder G with the steam boiler, and the pipe L, from the lower cylinder H, rises to the level of its top, and is arched like a syphon at the end L. M is a pipe with a cock which passes through the side of the cylinder AB, its funnel-shaped mouth within being about half an inch from the top, at the centre.

If, now, the exterior cylinder be full of cold water, (the vessels G and H being empty,) and steam be introduced through the pipe K, the vessel G will be heated, and the cold water adjacent to it being warmed, will ascend to the top of the cylinder AB, the condensed steam passing into the lower vessel H, which

also, with the cold water adjacent to it, will be heated, till both of the interior cylinders are boiling hot. The boiling water is then driven off, through the syphon L, and is followed by steam, which must be shut off by a stopcock. The heated water may be drawn off at any time from the pipe M, and the boiling distilled water issuing from L is applicable to various useful purposes. The reservoir AB is surrounded by non-conducting substances, and inclosed in a case, so as to part with its temperature very slowly, and the whole apparatus being of iron, and without any moveable parts, can hardly be deranged by use if well put together.

4. *The Wash-house and Laundry.*—As the process of washing is usually conducted, the laundress is immersed in steam and offensive vapour, and exposed occasionally to large fires, while the labour of her occupation is very severe. In the Derby Infirmary, on the contrary, the laundress is completely shut off from the stoves and grates; the fire-places being under ground, and in a separate apartment; and the manual labour is considerably diminished by means of a very simple machine, introduced by Mr Strutt, resembling that in common use among bleachers, which is set in motion by the steam-engine. A B (Plate I. fig. 3.) is a cistern of wood in which the cylinder C revolves. The interior of this cylinder is divided into four compartments, by planes at right angles with each other, and these planes, as well as the cylindrical surface, are perforated with numerous holes; each compartment having also a larger opening, with a small door at H. In the middle of the wash-house is a large boiler, containing 100 gallons, heated by steam, which is brought in clothed pipes from the steam-engine. Two sides of the room are provided with stone benches; a large table stands near the machine; and there are also wooden tubs for washing by hand occasionally. The linen is rubbed with soap the night before washing; and cold water having been introduced into the vessel A B, so as to rise to the height of four or five inches in the cylinder. The linen is put into the cylinder, and steam introduced into the vessel A B, until the water within is heated to the maximum, which is somewhat below the boiling point. The top D is then shut down, and the cylinder put in motion with such velocity as that the linen may be heard to *fall* from one side to the other of the cavities. In this way a charge of linen may be washed in less than half an hour, at a temperature which the hands of a laundress could not endure, and with much less injury than where the ordinary process is employed. The author mentions that considerable advantage in washing may be derived also from the cautious use of alkalies, both mild and caus-

tic; and he gives some good directions for preparing the latter. The clothes are sometimes boiled in the large boiler already mentioned, and after removal from the machine they are looked over and washed by hand in parts which require it.

Since the completion of the Derbyshire Infirmary, Mr Strutt has invented a machine for discharging the water from wet linen in a manner very superior to the common mode of wringing.

"The linen is placed in a square bag of strong sacking, kept open by wire rings; this bag is contained in a cast-iron box, which opens on one side to admit the linen, and then closes firmly. The interior surface of the box is grooved, to receive the water when pressed out. The pressure is applied by means of a sliding plate, which fits the box, and is forced against the end of the bag by a rack and pinion, and turned by a winch. The sides of the box prevent the bag from becoming wider; the pressure applied has therefore the effect of shortening the bag, till all the water is pressed out into the grooves. By this machine, the clothes are squeezed much drier than by the common method; and the pressure upon all parts being uniform, less injury is done to the texture of the linen." p. 61.

The mangle also has been made to move by machinery, which is a great saving of labour.

The *Laundry* is a large room in one of the wings of the basement story, with an adjoining apartment containing a warm air stove, such as we have already described, with a hot air chamber for drying the clothes, the fire-place being quite detached both from the laundry and the drying-room. In this stove the top of the *cockle* over the fire-place is flat, and a square chamber placed above it opens into the laundry, and is used for heating smoothing-irons. The air, which is the vehicle of heat, is introduced from without, through a long subterraneous channel, and after passing over the heated cockle into the large air chamber above it, enters *at the top* into a spacious closet in which the linen is placed to dry on horses of a peculiar construction, which slide in and out on grooved wheels running upon iron ribs. As the hot air cools, it descends loaded with the vapour of the linen, and is forced out below into a funnel at the bottom of the closet, and thus affords the most effectual means of carrying off the moisture without the least expence of fuel.* The laundry being thus detached both from the fire-

* The hot-closet of the laundry serves also to keep linen dry, and is occasionally employed to dry and air the beds.

places and the drying-room, can obviously be kept cool in summer, and in winter heated to any required temperature. Accidents from fire, and injury to the linen, are completely obviated; dust is excluded, and the current of heated *fresh* air, which passes over the linen, maintains its whiteness; the exclusion of light being, for this last object, very advantageous.

Some valuable tables and formulæ are subjoined to this account for calculating the proportion between the quantity of water to be expelled from the washed linen, and that of the fuel by which the heat is supplied. These calculations are founded upon the principles of Mr Dalton of Manchester, who has himself given an elaborate table shewing the force of aqueous vapour, the quantity contained in a cubic foot of space, and the depth of water evaporated in an hour, for every degree of temperature from 40° to 325°. But this subject falls more properly within the department of the chemist than of the medical inquirer.

5. *The Water-closets.*—"In most of the present public hospitals, nothing is more conspicuously bad than the water-closets: the Derbyshire Infirmary is, however, a striking exception to the contrary. They are so contrived, that the person who enters them, by the action of the door, and without any attention on his part, expels all the foul air; which is at the same time replaced by the warm fresh air of the house, and in returning, leaves the fresh air in its place, whilst, by the same action of the door, the basin is washed in the usual manner."

This invention was made by Mr Strutt on purpose for the Infirmary; and the building contains no fewer than seven water-closets, two in the middle story, and five in the third, all of the same excellent construction. D (Plate II. fig. 1 & 2) is the door to the water-closet, revolving on the arbour A, in a cylindrical cavity, which it fits so closely as to press the air before it in its revolution. B is a bar of wood inserted into the arbour at about four feet from the ground, between which bar and the door, the person who enters places himself, and having entered, the door arrives at the partition C, and the end of the bar at the point E. There is an opening in the closet at the top, over the point S, through which the air is expelled by the revolution of the door on entrance; and one of the lower pannels, V, of the door itself acts as a valve during the returning motion, and opening inwards lets in a supply of fresh air. The valves connected with the seat are on the construction invented by Bramah, and are set in motion by a wheel attached to the upper part of the arbour A, so ingeniously contrived, that on

the return of the door the pan is always cleared, without any attention from the person who had entered. *

The bedsteads throughout the wards are of wrought iron; the sacking bottom being attached to the frame by means of iron slips, which are pressed upon the edges of the sacking in the manner of a smith's vice. And Mr Strutt has added to his other benevolent inventions that of a moveable bed, which admits of being turned into various positions without distressing the patients. In Plate I. (figures 4, 5, and 6,) *gg* and *hh* represent the side bars to which the sacking bottom is attached. A is the point of suspension by which the head of the bed is supported in the pillar A P M; the motion of revolution being given by a wheel and rack work, checked in any required position by the catch *k*. The bed is lodged upon the surface S, which, by the motion of the rack work, can be thrown more or less out of the horizontal position, while it is kept tight, and at a constant distance from the sides, by means of its double attachment, on each side, to the bars *g* and *h*.

The book concludes with a brief description of the Pauper Lunatic Asylum at Wakefield in Yorkshire, as not only confirming what has been detailed respecting the Derbyshire Infirmary, but shewing abundantly the progressive improvement that may be expected if the useful inventions above described become more extended.

A detailed description of the Wakefield Asylum is now preparing for publication, and we may possibly, in a future number, give our readers some account of that excellent institution.

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* This contrivance is, in detail, as follows: (See Fig. 3, Plate II.) The part *a b* of the wheel *a b c d* is a steel spring, bending upwards when not pressed upon. L is a lever connected with the valve of the seat, and is depressed by pushing down the roller *r*. A is the arbour on which the door revolves. The motion of entrance being in the direction *d c b a*, the roller *r* runs along the *upper* surface of the wheel and depresses the spring, from the end of which it escapes when the door has completed its revolution. The spring then returning to its original position passes *over* the roller *r*, and the movement outwards through *b* to *c*, depresses the roller by means of the protuberance *t*, and thus raises the valve connected with the opposite extremity to the lever. The roller, at the end of this outward motion, passes the end *d* of the wheel, and rises to the upper side of it, and so on in succession.

VI.

Surgical Essays. By Astley Cooper, F. R. S., Surgeon to Guy's Hospital, and Benjamin Travers, F. R. S. Surgeon to St Thomas's Hospital. Part II. 8vo. Longman, London; Constable, Edinburgh, 1819. pp. 239. With Eight Plates.

Compelled as we are, but too frequently, to wade through productions which give us nothing that is new, and not much that is worth the having, even of what is old, it is really refreshing to us to meet with a work of one of the masters of the art. The whole of what are modestly termed the "Essays" in this volume are from the pen of Mr Cooper; and, after struggling with the disgust excited by the inanity and common place truisms, which issue from our teeming press, under the name of Treatises, Observations, or Illustrations, and which are intended only as decorous substitutes for the cure-all lucubrations with which the columns of our daily papers are adorned, we cannot fail to dwell with complacency on the operations of one of those gifted minds, which seem destined to extend the boundaries of the science they cultivate. The most distinguished of the surgeons of our great London hospitals are teachers, and the improvements, which the experience acquired in those extensive receptacles of disease enables them to make in the healing art, become familiar to the students who press round them for instruction, and may, by communication from man to man, form ultimately part of the common stock of the profession. But we are afraid that they may not be transmitted unaltered, that they may be corrupted by diffusion, so that each succeeding individual who receives them may have them less pure; as a circle, caused by a stone thrown into a lake, is narrow and well marked at first, but, as it gradually extends, becomes less and less elevated, and at length sinks to the level of the surrounding water. For reasons of this nature, we think it the duty of the medical men connected with our great institutions to give to the public, from time to time, the results of their experience, in a form similar to that of the work before us. All the members of the profession are thus put in immediate possession of the opinions, pure and uncorrupted, of those who are most likely to acquire correct ones. By such works as these "Essays," and quarterly and clinical reports,

not only do we get the opinions of men of skill and reputation, but all the facts, and all the steps of the reasoning process, by which those opinions were attained, are detailed to us in their original raciness and vigour, we have the premises as well as the conclusion, and learn how to follow our teacher in the path of research. Whilst well made books (to adopt French phraseology) teach us facts, works of the nature of those we have mentioned do so too; but, besides, they shew us how to find them out for ourselves. Amongst public teachers of surgery, none rank higher than Mr Cooper; besides the head to plan and the hand to execute, both of which he possesses in an eminent degree, he has so much amenity of manner and benevolence of disposition, that, whilst he is respected as a teacher he is beloved as a man. Those who were once his pupils, remain through life his friends; and hence he is enabled to enrich his lectures, and has enriched this volume with important facts and observations, voluntarily tendered by some of the most eminent surgeons in all parts of England. Those to whom the author is personally known will expect much from the work, and those who know him by character only will be inclined to do so too: we shall endeavour to shew both classes of persons, that a careful perusal of it will not disappoint them.

In this volume are comprised three Essays, in the first of which the subject of dislocation of the femur is continued from the former part of the work, and fractures of the neck of the thigh-bone, fractures and luxations of the knee, and luxations of the ancle and tarsal bones, are treated of. In the second, we have a description of unnatural apertures in the urethra, and of an ingenious and successful method of curing them; whilst, in the third, are contained some very ingenious speculations on the formation of encysted tumours, with useful remarks on the mode of their extirpation.

In his remarks on dislocations, the author mentions a curious circumstance, of which he was informed by Mr Cline, "that Mr Samuel Sharpe, who was surgeon to Guy's Hospital, and had a large share of practice in this metropolis, did not believe that a dislocation of the thigh-bone ever occurred." This is certainly a singular fact, but we are not disposed to deduce from it the same inference which Mr Cooper seems to do, when he says,

"It is really highly gratifying to observe the difference of knowledge in the profession at the present period, when compared with that of fifty years ago. What should we think of a surgeon in the metropolis in the present day, with all his opportunities of seeing

disease in the large hospitals of this town, who doubted the existence of a dislocation of the thigh, when we find our *provincial* surgeons immediately detect the nature of these injuries, and directly succeed in their attempts to reduce them? Let them never forget, however, that it is to their knowledge of anatomy that they are indebted for this superiority, and, more especially, to morbid anatomy."

We certainly should think that surgery had taken enormous strides indeed, did we regard the scepticism of Mr Sharpe, and the familiar knowledge displayed by modern surgeons with respect to these formidable accidents, as the measure of its progress; but we cannot think so meanly of our British practitioners of half a century back, as to suppose them ignorant of an injury well known to Hippocrates three thousand years ago, and of which all the varieties are described in the compendium of Celsus. We feel disposed to class these sceptical doubts of Mr Sharpe with those anomalies of the human intellect which occasionally occur to embarrass moralists and metaphysicians; with Dr Johnson's fondness for Fanny Phantom, and the belief of an eminent artist in the reveries of Emmanuel Swedenburgh. The comparison between metropolitan and provincial surgeons implied in the above quotation, may be allowable enough from Mr Cooper,—but it has been occasionally our lot to hear it from quarters whence it did not proceed with quite so good a grace.

We cannot refrain from referring to the unadorned but impressive picture of the evils resulting from unreduced dislocation of the femur, to be found in the second page, that our readers may be aware of the degree of gratitude due to those who, by sedulous attention, improve the art they profess, and instead of hoarding like misers their intellectual treasures, give them forth to the world, and do all in their power to make their fellows as enlightened and effective labourers as themselves. Much that gifted spirits possess they *cannot* communicate, but, in detailing to others their opinions, and the steps by which they attained them, they give all that *man* is able to bestow.

All that this volume contains on dislocations of the femur may be considered as merely supplementary to the valuable matter on the same subject, which will be found in the preceding one. Eleven cases are here detailed. In seven of these the bone was thrown on to the dorsum ilii; in three into the ischiatic notch; and in one into the foramen ovale. We are not informed whether Mr C. be disposed to consider the ratio expressed by these numbers as that of the general occurrence of these several accidents.

There will be found an able and elaborate account of Fracture

of the Neck of the Thigh-bone. This formidable accident is of two kinds, viz. within, or external to, the capsular ligament; and this distinction, according to Mr C., it is most important to keep in view; the former being, so far as the union of the bone is concerned, entirely irremediable; whilst, in the latter, under favourable circumstances of treatment and constitution, an osseous junction may be confidently expected. It will, perhaps, be in the remembrance of most of our readers, that some controversy on the former point arose between our author and M. Roux, one of the surgeons of La Charité in Paris; Mr C. advocating the opinion which we have attributed to him, whilst M. R. asserted that bony union might take place even though the fracture was within the ligament. This opinion is not peculiar to M. Roux amongst French surgeons; many able men of that country, as the justly celebrated Boyer and others, expressing a similar sentiment most unequivocally, and appealing to preparations in the museum de l'Ecole de Medicine, in proof of its accuracy.* Those preparations were examined by Mr Cross, author of a very sensible little book, entitled Sketches of the Medical Schools of Paris, but without conviction. We too have seen them, and our opinion of their value, as evidence on the point in dispute, coincides pretty nearly with that of the gentleman above mentioned; but as we do not profess to have bestowed upon them so much attention as it is evident that he did, we prefer referring to his book, those who are desirous of ascertaining what light they throw on this very important question. A very able advocate of Mr Cooper's doctrine has started forth in the person of Mr Collis, "who has published in the Dublin Hospital Reports the dissection of several of these accidents, and found a similar want of *ossific* union in the fracture within the ligament." Our author draws, too, a confirmation of his opinion from the following *a priori* reasons: in the first place, by the contraction of the muscles the fractured cervix is prevented from being in apposition with the head of the bone; secondly, even where the length of the limb is preserved, the abundant secretion of serous synovia into the untorn capsular ligament, hinders that degree of pressure of one bone upon another, which seems necessary for supporting the inflammation required for the production of callus; and, again, it is conceived, that the head of the bone thus fractured, deriving its nourishment only from the few vessels which pass along the ligamentum teres, is scarcely capable of assuming such an action as the formation of a bony union demands. Three experiments are related,

* Since this review was drawn up, a case has come to our hands, which will be found in the present number, at p. 212.

which are supposed to illustrate this reasoning. In a rabbit, and likewise in a dog, the neck of the thigh-bone was broken transversely, and on the animals being killed some weeks after, no bony union was discovered. In another dog the neck and head of the same bone were divided longitudinally, and when the animal was killed twenty-nine days after "the head and neck of the bone which had been longitudinally broken were united; but the neck was joined by a larger quantity of *ossific* deposit than that which joined the separated portions of the head of the bone."

We believe we shall not be accused of a disposition to underrate the talents of Mr Cooper, or of those gentlemen who have declared themselves partisans of his opinion, yet we do not hesitate to say, that it appears somewhat premature to consider it as an axiom in surgery, that bony union does not take place in fractures of the neck of the thigh-bone within the capsular ligament. Our belief is with Mr Cooper, but we cannot overlook the distinguished name of Boyer, nor even the certainly not inconsiderable talent and information of M. Roux and others, which are thrown into the opposite scale. Mr Cross was not convinced by the preparations in the museum, nor Mr Cooper by one which M. Roux sent to him; but others have been convinced. Mr Cooper himself possesses too philosophic a mind, to lay much stress upon *a priori* reasoning; and the confirmation of that reasoning from the experiments performed on brutes, is liable to one important objection,—that no means could in this case be attempted to furnish that apposition and pressure which he acknowledges are necessary to procure the union of a broken bone. He will probably himself allow, that had the transverse fractures been made externally to the ligament, the result, so far as the union of the bone was concerned, might have been precisely the same. Whilst we *think* as the author does with respect to the matter, we yet deem it more prudent to regard it as a disputed point in pathology, subject to further investigation. For an excellent account of the diagnostic marks, by which fracture within the ligament may be distinguished from fracture without and from luxation, as also for luxations of the knee, the reader is referred to the work itself. The author mentions an instance in which a surgeon suffered a loss of reputation, by promising too largely in a case of internal fracture, and avails himself of this opportunity of delivering a moral lecture to the younger members of the profession, on the uselessness and danger of quitting the sober path of induction, for the wild mazes of conjecture.

Mr Cooper is a most indefatigable person; he is really a matter-of-fact sort of man in the best sense of the phrase. He will

neither receive himself, nor give to his readers, any thing on supposition or hypothesis. Facts and experiments only will satisfy him. He introduces the subject of fractures of the knee-joint, by a series of experiments on those of the patella, from which experiments the logical inference is, that the union is ligamentous, *from want of apposition between the disjoined portions of bone*. Such an union was the result of all his experiments, whether the fracture were transverse or perpendicular, excepting the following.

"I divided the patella longitudinally in a dog, but took care that the division should not extend into the tendon above, or to the ligament below it, so that there should be no separation of the two portions. I examined it three weeks after and found it united, no separation existing between the two portions." He then subjoins in a note:—"The bone was under maceration found united in part by bone, and in part by cartilage, not yet completely ossified."

The experiments are well planned, so that the whole series of changes from the first effusion of adhesive matter, to the formation of perfect ligament, is clearly displayed.

We have rarely, indeed, found so much valuable information condensed into a small compass, as in that part of these Essays which treats of Fractures of the Knee-joint. The experiments just alluded to, ten in number; fractures of the patella transverse, perpendicular and compound; a singular instance of ulceration, extending through the ligamentous junction of a fractured patella, and ultimately destroying life; oblique fractures of the condyles of the femur into the joint; fracture of the body of the femur above the condyles; oblique fractures of the head of the tibia extending into the joint; similar fractures not so extending; are all comprised within twenty pages, the accidents being illustrated by valuable cases. A tyro in book-making would have formed a respectable octavo out of such materials, whilst under the hands of a proficient in that line, they would have swollen into a goodly quarto.

After premising on the structure of the ancle-joint some observations, for the accuracy of which the author's high character as an anatomist is a sufficient guarantee, and bestowing on simple dislocations of that joint all the attention so important a subject deserved, Mr Cooper furnishes us with a very excellent and elaborate treatise on its compound dislocations. This is a very valuable part of the book, and the one which the author has taken the most pains to elucidate by cases, derived not only from his own experience, but from that of a great number of intelligent and well informed practitioners in various parts of the country.

It is obvious, that, in these accidents, the tibia may be displac-

ed in the same directions as in simple dislocation, internally, externally, and forward, the only peculiarity of compound luxation being, that "the joint is laid open by a wound in the integuments and ligaments, opposite to the laceration of the skin, by which the synovia escapes, and through which the ends of the bone protrude." For an admirable account of the process of nature in repairing these injuries, our readers must consult the work: it will not disappoint them, and they will be gratified by being informed that they "do not lead to permanent anchylosis, for if passive motion be begun as soon as the parts, from cessation of pain and inflammation, will permit, motion will be restored, not always entirely, but with little diminution, *and the other parts of the tarsus will acquire such an extent of motion, as to render the deficiency in the mobility of the ancle-joint but little apparent.*"

The treatment of the injury, as recommended by the author, will be best understood from a perusal of the cases, which our limits do not admit of our transcribing. "The first question," he says, "which arises on this subject, is the following: *Is amputation generally necessary in compound dislocation of the ancle-joint?*" The answer is, as was to be expected, in the negative, and the following origin of such an answer displays, we think, the characteristic candour of the writer.

"The first circumstance which led me to doubt the true judgment of the opinion, which recommended an indiscriminate amputation of those injuries was this. I was, many years ago, going into the country with a friend of mine, and we met with a surgeon in our journey, who put this question, "What do you do in compound dislocations of the ancle-joint?" I do not recollect the reply, but he proceeded to say, I have had a case of compound dislocation of the ancle-joint under my care, in which I told the patient he must lose his limb. Not approving this advice, his friends sent for another surgeon, who said he thought he could save it. The patient placed himself under his care, and the man, he added, was recovering."

Under some circumstances, Mr Cooper is an advocate for sawing off the protruded ends of the bones. What these circumstances are, will be best understood from the following detail of those, under which he recommends the bones to be simply returned to their places.

"If the dislocation can be easily reduced, without sawing off the end of the bone; if it be not so obliquely broken, but that it remains firmly placed upon the astragulus when reduced; if the ends of the bone be not shattered, for then the small loose pieces of bone should be removed, and the surface of the bone be smoothed by the saw; if the patient be not excessively irritable, so as to occasion the muscles

to be thrown into violent spasmodic actions in the attempt at reduction, and which leads to subsequent displacement; when the limb has been reduced under such circumstances, the bones should be at once returned into their places, and by the adhesive inflammation the parts should be united; but rather than amputate the limb, *if the above circumstances were present,* I should certainly saw off the ends of the bone."

The words in italics should obviously be read, "if the above circumstances were not present," or "if the opposite circumstances were present." We may here be allowed to remark, in passing, that its style is by no means the best part of this work; that it is occasionally deficient in the most important quality of language either spoken or written,—perspicuity.

Even in desperate cases, one of which Mr Cooper relates, we may save the limb. Still cases occur in which we shall be obliged to amputate; and the following reasons for the adoption of this procedure are assigned: the advanced age of the patient; difficulty of reducing the bones; the shattered state of the tibia, astragalus, and os calcis; the dislocation being at the outer ancle; the bone being reduced but not remaining *in situ;* gangrene; excessive suppuration; extensive exfoliations; irritable state of the constitution; and great deformity. It is evident that some of these may rather lead us to saw off a portion of bone than to remove the limb. Mr Cooper informs us, that amputation does not always succeed; that a considerable number on whom the operation is performed for compound dislocation of the ancle, and compound fracture of the leg, nevertheless die. This is an interesting subject, and we regret that it is very lightly touched upon. Details as to the period after the accident, at which the operation was performed, &c. we might reasonably have expected, and they would have explained what is now very obscure.

There is one observation on mortification of the foot, consequent on these accidents, which surprised us not a little from so able and experienced a surgeon. We are told that amputation here "must be generally done when limits appear to be set to the extension of the mortification." Now, the experience of our army surgeons in the peninsular campaigns, and that of Larrey, have fully shewn that there is no necessity for scrupulosity on this score; nay, if we remember right, in some of the Baron's amputations for what he very properly terms "Gangrene Traumatique," the incision was made in parts verging to mortification, and yet the patients recovered. Mr C. makes an exception to his general rule in favour of mortification from injury to a blood-vessel. He might safely extend it to all cases of traumatic gangrene.

We are so much afraid of being seduced by the value of the contents of this volume to exceed the ordinary limits of our analyses, that we beg the reader to consult the work itself for observations on dislocations of the tarsal bones; and we advise that he should direct his attention to two cases of compound luxation of this kind, which were treated in St Thomas's Hospital by Mr H. Cline.

In the second short but valuable essay, we have some remarks, to the correctness of which we willingly bear testimony, on the abuse of bougies. The very sensible *strictures* on this subject are illustrated by a fatal case, to which we are convinced the faithful records of surgery might furnish many a parallel. With respect to the main subject of the essay, unnatural apertures in the urethra, attended with loss of substance, Mr C. relates the expedients he has had recourse to for healing them,—an object not very easy to attain. It struck him that they might possibly be closed by the contraction that takes place in the skin by the process of cicatrization. Successive sloughs and granulations were formed by the application of the nitrous acid on the edges of the fistulous opening. In one case, by repeated applications of the acid, a cure was obtained in almost nine months. In another the same object was attained by the application of the *taliacotian* principle, the deficiency being supplied by a portion of integument dissected from the scrotum. The relation of this case is well worthy of perusal.

The subject of the last essay is thus stated by the author:

"There are different species of encysted tumours in the body, but that to which at present I intend to confine my observations is the tumour which is situated just under the skin, and is so frequently seen upon the head, the face, and upon the back, and occasionally, but less frequently, under the skin upon other parts of the body."

This peculiar tumour he supposes to be an enlarged follicle incapable of discharging its contents from an obstruction of the orifice by which it opens on the surface of the skin: and we think the evidence adduced for this ingenious pathological speculation sufficiently decisive. He disapproves of the common mode of dissecting out these tumours whole; but recommends that they should be opened by a free incision, their contents discharged, and *then* that the cyst should be dissected out. There is a curious account of horns which sometimes grow from the ossified cysts, and a plate representing a very enormous growth of this kind on the head of a gardener.

It remains for us now to recommend this work to our professional brethren as highly worthy of a place in their shelves. It belongs to that select class of medical works of which reviews may shew the value, but cannot teach the contents.

PART III.

MEDICAL INTELLIGENCE.

On the 17th of January a paper of Dr Fergusson's was read before the Royal Society of Edinburgh, on the nature and properties of the marsh poison, as known under the titles of Marsh Miasmata and Malaria, wherein the author endeavoured to prove, from reference to the medical topography of different places in the south of Europe and the West Indies, that the universally received theories of aqueous and vegetable putrefaction, singly or combined, being the sources of this poison, was unfounded; that putrefaction under any shape had no effect in producing it; that it never emanated from water in bulk, however putrid; but is the product of a highly advanced stage of the drying process in absorbent soils that had previously and recently been saturated with water. The illustrations were principally taken from the countries where the author had served during the last twenty-five years, and exhibited a great variety of facts and observations in support of the opinions advanced. Other properties of the marsh poison, such as its adherence to, and attraction for, lofty umbrageous trees and rising grounds in the neighbourhood of swamps; its concentration in ravines and hollows; its absorption by passing over water; its rarefaction or dissolution by the sun's heat, and by regular currents of wind, were also pointed out and illustrated. In the course of his paper, the author, while treating of the effects of the marsh poison, was led to consider the yellow fever of the tropics, which he views as the extreme and most baleful product of the marsh poison; and he brought many facts and arguments, which he conceived incontestibly established the noncontagious nature of that dreadful malady. He concluded with some remarks on the mode of reception of the marsh poison into the human constitution, whether by the stomach, lungs, or skin; which last he seemed to regard as the most probable chan-

nel; an opinion which he supported by some curious illustrations taken from the History of the Plague of the Levant, and from a consideration of the peculiar dermoid idiosincrasies of the African or Creole negro.

We wish much to see a full developement of the views contained in this paper, many of which are both novel and important. When we recollect that it proceeded from the same pen as the essay on the Syphilis of Portugal, which first tended to direct the attention of professional men to an inquiry from which the most important results may be looked for, we confidently hope that the same spirit of investigation may be awakened to the no less interesting subject of marsh effluvia.

Appendix by Dr Abercrombie *to his Paper on the Pathology of the Intestinal Canal.—Part II.*

After that paper was printed, and while I was engaged in arranging materials for the third, *on diseases of the mucous membrane*, some doubts occurred to me in regard to one part of the doctrine which I have proposed. I allude to that part of it in which I have supposed peritonæal inflammation to be sometimes accompanied by diarrhœa, and which I have illustrated by the fatal case, (case 1st,) and by cases 2d and 3d, which terminated favourably. In case 1st there certainly was extensive peritonæal inflammation; but the doubt is, whether it was the primary disease; for circumstances have occurred to me which induce me to believe, that, in some cases of this kind, the primary inflammation is in the mucous membrane, and that the disease afterwards extends to the peritonæum. This appeared to be the course of the symptoms in case 13th; and I regret extremely that I have no account of the state of the mucous membrane in case 1st. It differed from case 13th, in the progress of the disease being so much more rapid, and the peritonæal inflammation so much more extensive; but this does not prove the nature of them to have been different. I shall afterwards have occasion to describe several cases of inflammation of the mucous membrane, from which it will appear that it frequently terminates by peritonæal inflammation, or by enteritis; but I am not acquainted with any case of this kind in which the disease was so rapid as in case 1st. I suspect, however, that case 2d was of this nature, and that it was arrested in its progress when the inflammation was beginning to affect the peritonæum. In case 3d, also, the disease was probably in the mucous membrane, and perhaps it was partially affected in case 8th, in which, however, the peritonæal inflammation seemed to be the prominent disease.

On this important subject I have received an interesting communication from my esteemed friend, Dr Alison, in which he expresses the same doubts in regard to some of my cases, and his suspicion that in several of them the primary disease was in the mucous mem-

brane. He mentions a case that occurred to him, in which "the pain was partial, and liable to severe exacerbations, not very severe in the intervals, and not the worse of the erect posture. There was some diarrhœa, great increase of the pain on the operation of a mild purgative, and the pulse, up to four hours before death, never got above 84. The inner membrane of the caput cœcum, and part of the colon, was very much inflamed, extensively ulcerated, and in some places gangrenous, and the intestine was nearly perforated in several places, but the peritonæum was scarcely at all affected." I shall not extend these remarks at present, farther than by proposing the diseases of the mucous membrane of the intestinal canal as a most interesting field of investigation. They occur both in an acute and chronic form,—may be seated in the stomach, and in any part of the intestine; and a careful examination of them promises most important results, in regard to many diseases of these organs, which are hitherto involved in much obscurity.

In attempting to distinguish the various modifications of intestinal inflammation, one form of it has been referred to, which I have conjectured to consist of inflammation confined to the peritonæal coat. To the observations made upon that subject, I find it necessary to add, that I do not consider them as applicable to every form of peritonæal inflammation; and particularly, that I did not mean to refer at all to the peritonitis of puerperal women, in which the symptoms are considerably different. I merely intended to describe a disease which has frequently occurred to me in practice, and which is generally to be considered as equally formidable with genuine enteritis, while it differs from it in the essential particulars which have been mentioned, the bowels being readily moved by mild medicines, the pain suffering remarkable remissions, the absence of vomiting, and the pulse being often less affected than in enteritis, especially in the early stages. From these deceitful characters it is a disease of much interest in a practical point of view, and the nature of it presents an important field of investigation, in which I have only proposed conjectures, to be established or overturned by more extended observation.

Connected with this subject there are various other important objects of inquiry, to one of which only I would at present allude very briefly. Whenever we find on dissection gangrene in the intestinal canal, we are in the habit of concluding that inflammation had preceded it. I have some doubts whether this be in all cases a correct inference. Gangrene is indeed a very frequent effect of inflammation, but it also arises from other causes. Without entering upon these causes in general, I submit the following remarkable example, which occurred to me lately.—A man aged 63 was suddenly seized with a deep seated pain in the right side of the pelvis, followed by a feeling of numbness in the right thigh and leg, with weakness, or partial paralysis of these parts. On the 5th day from the commencement of the pain, the extremity was observed to be swelled. The swelling began in the ancle, and extended rapidly upwards along

the leg and thigh. On the 6th day the whole extremity was very much swelled, without much change in the colour of the integuments. The swelling was throughout *emphysematous*, crackling in every part, and discharging, when punctured, much fetid gas, with a distinct whizzing noise, and a small quantity of dark fluid. At night the integuments had assumed in several places a dark livid colour, his countenance was depressed and anxious, and the pulse extremely feeble. He died early in the following morning. *Dissection.*—The right limb was of a dark gangrenous appearance, with some large vesicles containing a dark-coloured fluid. The muscles were universally black and gangrenous. The femoral artery being laid open and traced upwards, there was found in several places disease of its inner coat, which was thickened and soft, and in several places separated from the other coats, so that portions of it lay across the area of the vessel, like valves. This appearance occurred in several places in the upper third of the femoral; but the most remarkable was in the upper part of the external iliac; here the inner coat was separated for about an inch and a half, and the separated portion had fallen down into one irregular mass, which completely stopped the canal of the artery, as appeared from a firm coagulum of blood which was found above it. The aorta was in several places diseased on its inner surface, ulcerated, and the inner coat partially separated. In the right side of the pelvis several of the smaller vessels were ossified,—those in the left side were sound. The right side of the pelvis presented a dark gangrenous cavity, with much dark fluid, and ill conditioned pus; but this appearance was entirely on the outside of the peritonæum, all the intestines being healthy. On the left side all the parts were sound.

In this remarkable case there was loss of muscular action, followed by extensive gangrene, and both referable to the singular disease in the artery, obstructing the circulation. It is a curious subject of inquiry, whether the muscular action of the intestinal canal has any dependence on the circulation in the abdominal vessels, and whether interruption of this action, followed by gangrene, may arise from a cause of this kind, without inflammation. An affection is met with in old people, which differs in its phenomena from the ordinary cases both of inflammation and of ileus. There is a sudden and complete interruption of the action of the intestine, without any of those urgent symptoms which occur either in enteritis or in ileus;—the belly becomes distended, with little or no pain, and no tenderness. There is sometimes vomiting, but the pulse is little affected, and the whole appearance of the patient conveys no impression of active disease. But no medicine will go through the bowels, the patient dies in a few days, and we find, on dissection, extensive lividity and gangrene, though there had been no inflammatory symptom. I saw a case of this kind very lately, along with my friend Mr Whyte, in a lady aged 70, who died on the fourth day, without a single symptom indicating inflammation. Nearly the whole tract of the small intestine was distended, and of a dark livid colour; and a portion of the

ileum about two feet in length was perfectly black and gangrenous. The mesentery connected with this portion was also very dark. On no part of the canal was there any redness, or the slightest appearance of inflammatory exudation. The abdominal aorta was extensively diseased, its inner surface being in many places ulcerated, and the internal coat destroyed. At one place the blood had insinuated itself between the coats, so as to elevate them, for a considerable space, into a tumour which appeared externally: it was not a cavity like an aneurism, but a spongy fungous mass of a very dark colour, in which the natural appearance of the coats was entirely lost. This disease was very near the origin of the superior mesenteric artery; nothing unusual could be detected in the mesenteric itself. In other cases of this kind, after various strong medicines have been given, the bowels are moved fully, and after another day the patient dies, rather unexpectedly, when we are disposed to think that the disease (the obstruction of the bowels) has been removed.

I take this opportunity of correcting a typographical error, which materially affects the sense. In Case 13th of Part II. it is said, that the patient was seized with violent pain of the abdomen on the 13th of June;—it ought to have been the 19th.

On the Use of Nitre in Fever. By W. M. Ross, Surgeon, Leith.

In the months of January, February, and March, of the present year, an epidemic fever prevailed in some parts of Leith, differing from that which had made its appearance the preceding year, and which had swept away great numbers in the same neighbourhood. It was confined to the lower orders, inhabiting houses excluded from the free circulation of the atmospheric air, most of whom had been afflicted with the previous epidemic.

The fever appeared in a mixed form, commencing, in general, with symptoms of an inflammatory, and terminating in those of a typhoid nature.

In all cases which came under my observation the accession of the complaint was marked by a general anxiety and lassitude, which were succeeded by rigors and flushing, at first transient and alternating, but terminating in a continued pyrexia. The pulse was then strong and hard, the tongue white, accompanied with much thirst, and the urine very high-coloured.

In a short time, however, the tongue assumed a yellow and then a brown appearance; the pulse became quick, but still hard, and a gradual prostration of strength supervened. In this stage there was a great oppression at the precordium, particularly when pressed with the fingers. Some patients had considerable dyspnœa. In others diarrhœa was very troublesome.

On the seventh day the fever obtained its acme. In every case I was enabled to predict with the greatest certainty as to this crisis.

The debility which succeeded was accompanied by severe pains in the shoulders and wrists, which gradually abated with the renewal of

the patient's strength. Where a relapse occurred, and from inattention this was frequently the case, the fever, especially if there had been much diarrhœa and consequent debility, assumed the form of typhus mitior. In no instance was there any putrid tendency.

From the numerous cases I attended, I had ample opportunity of remarking the most suitable treatment of this epidemic. In general this was sufficiently simple. Where at the outset the inflammatory symptoms ran high I took away blood, not, however, to such an amount as might induce farther debility in the succeeding stage. Where there were much restlessness and cough I experienced good effects from opiates, and in a few cases from blisters. The employment of cold water by affusion was attended with the happiest consequences, generally producing a remission and abatement of the violence of the fever.

But I chiefly esteemed the nitras potassæ an invaluable remedy in this complaint.

The encomiums bestowed on this substance by Stahl are, in my opinion, justly merited, particularly as they regard its employment in febrile affections. If modern practice does not warrant the extent of that physician's praise, I must conceive the circumstance to arise entirely from the insufficient quantity given as a dose. The good effects of nitre will only be discovered by employing it liberally; and although attention and discrimination be required in such a practice, it will, I believe, be found in the above cases of great and general efficacy.

I usually ordered a liberal dose of this salt, suited to the strength and other circumstances of the patient, to be given in his ordinary drink about noon, at the time when inflammatory symptoms were beginning to subside, and a second dose in some warm fluid in the evening. About bed-time the patient generally perspired freely, and experienced a consequent abatement of the febrile action. This commonly procured a good night's rest. Superseding, in some instances, the necessity of cold affusion, I continued this practice till the seventh day with manifest advantage. Of this I am the more readily convinced, as in cases where I did not employ the nitre, the fever was more violent, and the succeeding debility proportionally great.

The beneficial effects of this substance I am inclined to attribute to the following circumstances:

1. By abating the febrile heat and commotion of the blood, the excessive irritation of the animal fluids in general is allayed, and a more equable distribution of them thereby promoted.

2. By promoting the insensible perspiration, and thence moderating the action of the extreme vessels.

3. By augmenting the urinary discharge, and consequently relieving the uneasiness produced by the retention and acrimony of that fluid.

I am quite aware that the employment of the nitras potassæ in fever, either as a refrigerant, diaphoretic, or diuretic, is no novelty in practice. Feeling, as I have done, its efficacy in all these characters, I submit these remarks, in the hope that the attention of practitioners may be directed towards the employment of a substance so abun-

dantly produced by nature, and which has not, in my opinion, been hitherto administered with sufficient liberality. There is caution, I know, required in its use, particularly where the previous habits of the patient have been irregular, or emaciated by disease. In such cases the objects we have in view may be too readily and freely promoted, or the medicine may be found to operate from its aperient qualities. But every practitioner is aware, that it is only from a patient and minute attention to such circumstances, that a successful practice is likely to result. I have only, in the mean time, to content myself with having expressed an *opinion*, which, if it be the mean of promoting future inquiry, I shall esteem the sentiment of Crato not distant from the truth:—"Regina vitæ et rerum omnium opinio est. Itaque ne falsitate simplicemur primum ipsi elaborare debimus, ut verum atque rectum toto animo sequamur." *Montan. Præf. Cratoni.*

Case of Cholera, extracted from a Letter from JOHN WHITING, M. D.

HAVING been called, during the very hot weather of last harvest, to visit a man in the middle age of life, about eight o'clock in the morning, I found him in a most deplorable situation. On first sight he appeared to me to be labouring under tetanus in its most severe form and advanced stage; for his whole body was in a spasmodic state, and the energy of the system was quite exhausted. He complained, in a feeble tone of voice, that his head seemed to be girt round with a tight cord. His eyes were generally fixed and staring, the arms frequently stretched out, and the fingers, every now and then, had the appearance which I have more than once observed in children labouring under hydrocephalus, bent forward at an obtuse angle at the upper joint, but slightly curved backward from that point to their extremities. The cramp in his thighs and legs exceedingly tormented him. The diaphragm and muscles of respiration were so much affected that his breathing was rendered very laborious, and every now and then, as in tetanus, it was entirely arrested, violent pain being felt striking through the chest to the back at the same moment; and the patient's whole body was brought into the state of opisthotonos. The pulse, beating at the rate of about 100 in a minute, was extremely feeble, irregular, and intermitting every five or six strokes. All the secretions seemed stopped, the eye dull and dry, the tongue, although clean, yet free from a particle of saliva; the skin cold; his extremities felt as if they were those of a corpse. In short, such was his state, that when I first saw him I considered him a dying man, and thought that he could not live more than half an hour. Of course, I lost no time in learning the history of this poor man's disease, expecting fully to have my first view of the case corroborated by the relation of its cause and progress; but instead of this, was agreeably surprised at finding that all these tetanic symptoms were only an aggravated form of those spasms which generally

more or less accompany cholera morbus; for I learnt that the man, after returning from the harvest field the previous night, had eaten a hearty supper, went to bed well, and almost immediately fell into a sound sleep, from which he did not awake until about four o'clock in the morning, when he was seized with a violent pain in his bowels; the abdomen was much swollen, and he felt an urgent desire of going to stool. He discharged a large quantity of liquid feces;—soon afterwards he became sick. The purging and vomiting had recurred every ten minutes or quarter of an hour, till the time I saw him; and he had gradually sunk into the miserable state which I have described. This history at once suggested to me the methodus medendi, one which has never failed me in the treatment of this formidable disease. My aim is, to render the bile in the stomach and bowels less offensive, by diluting it largely by some watery fluid, as thin gruel, barley-water, or simply warm water. As some gruel was at hand, I made him drink about a pint of it; and with a view of lessening the formidable exhaustion of spasm, I added about half a wine glass of gin, and 30 drops of laudanum. After a few minutes he felt a little better; still, however, the sickness and spasms continued. I therefore, in about eight or ten minutes gave him another pint of gruel, and 30 more drops of laudanum. In a little time the spasms began to give way, his countenance improved, and his pulse rose and became regular, and he said he thought he should fall asleep had he not still cramp in his thighs. I waited about half an hour, hoping he would sleep; but finding him still restless, I gave him half a pint more of gruel. Soon after this he was so much better that I left the house, having directed his wife to give him half a pint of gruel every quarter of an hour. I had gone but a few steps when I was called back; and on going into the room I found that he had vomited nearly a wash-hand bason full of an olive green fluid. From that moment every symptom of the disease gave way. His countenance became natural, his skin warm, his pulse steady and full, and he said that a delightful glow pervaded his whole body, particularly his legs and thighs. After this he fell into a sound sleep; the vomiting never returned, the bowels became regular, the stools being rather more bilious than common; and in three or four days the man returned to his employment in the harvest field.

Swaffham, November 19, 1818.

Second Annual Report of Continued Fever in Leeds. By Adam Hunter, M. D. Physician to the House of Recovery.

The number admitted during the last twelve months is considerably less than in the preceding year; but, as the fever declined, the cases have become more anomalous in their character, and have assumed a greater variety of disconnected, and not unfrequently, more unsurmountable symptoms. This, I believe, usually happens when the prevailing influence of contagion has ceased, and when fever arises from cold, wet, or any other incidental circumstance.

The establishment, and extensive operation of the Vagrant Office, to which I alluded in the last report published in your Journal for April 1819, has, as was anticipated, proved highly beneficial in its

consequences.* I have this season to record a very small number of admissions from the lodging houses; nor has fever been so prevalent in the lanes and alleys adjoining those ci-devant receptacles of human wretchedness. The number of cases in the town bears a small proportion, in comparison of their relative population, with those received from the adjacent townships and villages. The Vagrant Office, to a certain extent, enables us to account for this rather unusual occurrence, but much must also be attributed to the prompt and vigorous measures pursued, for the checking of infection. When a patient is admitted, notice is given to a medical officer, termed an inspector, attached to the institution, who immediately visits the house from which the patient is brought, sees it thoroughly ventilated and fumigated, causes old furniture, clothes, &c. to be cleansed or destroyed, and the walls to be whitewashed if necessary. Such poor families as are unable to bear the expence are remunerated, and small additional premiums granted to those who distinguish themselves by a ready acquiescence and diligent perseverance in his orders. Thus, we seldom receive two patients at the same time, from any family in the town, though the individual cases in the street may be numerous; in the more distant townships and villages, where those measures cannot be so carefully attended to, it is not unusual to find a whole family down in fever at the same period.

Provisions, though in no extra abundance among the lower orders, have been good in quality; and the agency of want, as connected with fever, or even general disease, has been seen to operate in only a very few instances, in so few, indeed, as to warrant some doubt respecting the full extent of the studied misery in the tales of the time.

In the language of that revered father in physic, Sydenham, the constitution of the year has, on the whole, been favourable to frail mortality. No part of the season was particularly remarkable for any excess in the obituary, or any prevailing epidemic, while the small number of admissions made it less easy to seize upon any leading symptoms, which might constitute a real or apparent variety in the nature or species of the fever. The winter months, as in the preceding year, were mild and open, and the local determination which occurred in almost every well marked case when early attacked, readily yielded to the usual remedies. Those cases which proved fatal, as will be seen by the tables, were nearly all brought to the house in the second or third stage, and had generally signs of previous inflammation. They, not unfrequently, sunk into that low, lingering, uncomplaining state, so accurately noticed by Dr Cheyne,

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* During the last year, 1754 men, women, and children have been comfortably lodged for one night, and a small donation of from 3d. to 8s. given to the most necessitous. In the morning they are conveyed out of town. As a measure of police, it has perhaps been still more advantageous. The expence of the whole establishment for this period scarcely amounting to L. 150.

in his first valuable report of the Hardwicke Fever Hospital;* the facilities of dissection which he seems to have enjoyed, the want of which so many must regret, have also enabled him to assign the cause, and consequently improve the treatment. The crisis was not generally so complete as in the former year, and perhaps from this cause relapses were much more frequent.

The weather in January was unusually mild, there being little frost, and the thermometer seldom attaining the freezing point. February was also very mild at the commencement, with occasional snow and sleet showers towards the conclusion. March did not differ much from the preceding month; there were considerable falls of rain in the latter part of this month and beginning of April. Scarlet fever, of the mildest kind, was pretty general during the winter and spring, it also returned in autumn. The summer was fine, and, although the heat and drought was considerable, the cases of fever did not assume the same malignant appearance, so remarkable in the former season. The cases of cholera morbus which occurred were generally very severe, but by no means so universal as in the autumn of 1818. The constitutional diathesis seemed peculiarly irritable in September; there were frequent transitions from general fever to severe local inflammation, which was overcome with difficulty, and in several instances proved fatal. As connected with this period, I may observe, that I have sometimes remarked, that cases recently admitted appeared to change their type, and assume a certain uniformity or *prima facie* appearance with the other cases in the same ward, whether this arises from the general atmospherical, or febrile influence for the time, or in consequence of the air breathed in the ward, I shall not take upon me to determine. We had more than an usual number of small-pox cases during the season, one of which proved fatal, in none brought to the house had vaccination been performed. † The varioloid disease which has recently occasioned so much discussion, *et adhuc sub judice lis est*, made its appearance in Leeds. It was not, I believe, considered as identified with small-pox, by the generality of our practitioners. In only a few instances did it attack those previously vaccinated in a regular manner; in none, to my knowledge, did it terminate fatally. Intermittents are very rare in this district; I do not remember one case being brought to the hospital for the last two years, nor have I met a well marked instance in private practice.

I shall now proceed to the tables, which are yet by no means so complete as I could wish; in the particulars, however, which are stated, every attention has been paid to render them as accurate as possible. The last report ended with October 1818; I have, therefore, included the two remaining months of that year.

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* Dublin Hospital Reports, Vol. I. p. 30, 37.

† Cases of small-pox, when known as such, are not admissible, but they are brought in when under the influence of the primary fever.

TABLE I.—*Shews the Monthly Admissions; Deaths; Male and Female Patients; the aggregate Number in their Families; the Average Number of Days ill previous to Admission; while in the House; Total; the average Age, with the cases of Small-Pox and Scarlet Fever. In the calculations the fractions are not retained.*

1818-19 14 months.	Admissions.	Deaths.	Male.	Female.	No. in Families.	Average No. of days ill before admission.	Average No. of days in Hospital.	Total No. of days ill.	Average of Age.	Small-Pox.	Scarlet Fever.	The age and number affected. *Table* II. Age.	Number.
November	30	0	11	19	176	6	9	15	20		1	1to10	21
December	19	2	13	6	113	10	11	21	29	2	1	10–20	101
January	30	3	15	15	159	7	11	18	21	1	1	20–30	95
February	17	2	6	11	97	6	14	20	20	1	1	30–40	30
March	13	2	7	6	79	13	5	18	22		2	40–50	21
April	20	1	10	10	137	7	10	17	23	2		50–60	7
May	24	2	15	9	164	6	8	14	30			60–70	4
June	13	1	8	5	101	8	9	17	27			72	1
July	13	1	7	6	61	8	9	17	19	1	3		
August	11	0	4	7	74	9	11	20	22				
September	36	4	17	19	221	7	8	15	22		2		
October	37	3	21	16	218	9	10	19	25		2		
November	12	1	7	5	69	7	11	18	20				
December	5	0	3	2	32	11	11	22	19				
Total	280	22	144	136	1701 or 6 to 1	$7\frac{6}{14}$	$9\frac{11}{14}$	$17\frac{13}{14}$	$22\frac{11}{14}$	7	15		

TABLE III.—*Shews the Number from the different Townships, &c.*

	No.
Hunslet,	55
Holbeck,	23
Beeston,	3
Headingley,	3
Potter-Newton, and Chapel-Town,	18
Leeds,	178
Of which there were soldiers	6
Lodging-houses,	3
Workhouse,	2

This Table will be better understood by referring to the last report, where the population is stated. The cases in Leeds were taken from 50 streets or lanes, averaging $3\frac{1}{2}$ to each; but a great majority came from 10 particular streets. The fever in Hunslet and Holbeck was more than usually prevalent. Those from Headingley were all of one family. Of the Potter-Newton cases, there were three from one family, and four from another.

Table IV.—The Fatal Cases.

No.	Name.	Age.	Ill before admission.	Days in the hospital.	Died on the	No. in family.	Occupation.	Residence.	Remarks.
7	Mary Knowles	18	4	12	16	4	Servant	Meadow Lane	Confluent small-pox.
9	John Tindale	27	12	19	31	5	Collier	Hunslet	Pectoral affection; relapse.
4	Samuel Potterfield	17	24	3	27		Soldier	Leeds	Moribund on admission.
6	Elizabeth Bailey	22	5	6	11	3		Hunslet	Head.
21	James Schofield	26	5	9	14		Cropper	Beeston	Sore throat and cough.
9	Martha Wade	24	21	15	36	5		Marsh Lane	Chronic disease of the abdominal viscera.
18	Lydia Stead	16	4	1	5	5	Factory girl	Holbeck	Concussion of the brain.
7	William Gatfield	18	8	2	10	8		Leeds	Pleuritis.
12	Margaret Brown	37	24	1	25	5			In articulo on admission.
2	Hannah Clarke	20	16	21	37	6		Potter-Newton	Relapse.
8	Thomas Town	20	7	13	20		Servant		Affection of the head.
15	William Toothill	50	8	8	16	6		Leeds	Head and bowels.
21	Joseph Holmes	28	8	8	16	4	Labourer	Beeston	Case desperate on admission.
7	Ellen Morris	23	9	15	24	5		Leeds	Head.
19	Thomas Preistley	17	10	18	28	7	Prentice		Relapse; head and bowels.
20	Martha Bevers	14	8	2	10	9		Bowman Lane	Pain in the side; case hopeless.
21	Ann Tindale	14	3	18	21	6		Hunslet	Pain in the head and side.
23	Charles Riggall	22	24	20	44	5	Shopkeeper	Leeds	Head and throat.
3	Ann Wilson	20	5	5	10	7	Factory	Meadow Lane	Stomach.
13	Ann Wilson	18	24	25	49	6		Water Lane	Relapse; pectoral affection.
30	Thomas Harrison	16	5	25	30	8		Leeds	Lungs and head.
30	Thomas Sunderland	16	3	3	6	4			Head.

I shall conclude this report, by stating a few additional remarks on one of the cases where dissection was permitted.

Lydia Stead, and her sister, were brought to the house on the same day, supposed to labour under scarlet fever. This was the case with the latter, but Lydia showed no symptoms of the disease. From her pulse being unusually slow, 64 in the minute, I was led to suspect some other mischief. On minute investigation, I found she had tumbled down a flight of stairs some few days before, which, for reasons best known to herself, she thought proper to conceal. She was stunned at the time, and had not been well since the accident. She died rather suddenly on the day after admission. I was so fortunate as obtain an examination of the body.

Dissection.—During the removal of the calvarium, a considerable quantity of blood, perhaps ℥v., escaped. The meningeal vessels were turgid, and a deep erubescence spread over the pia mater. On dividing the substance of the brain, the medullary part was every where spotted with blood. The ventricles contained no extraordinary quantity of fluid. The lungs were healthy. The contents of the abdomen

natural, save that some small calculi were found in the gall bladder; and the small intestines had had a general blush in one part, and a livid hue in another. The liver might perhaps be considered large; its texture was natural. The heart had a false polypus on either side.

To lose 22 out of 280, or 1 to 12¾, may be deemed a large proportion in comparison with some recent details. But, besides that regular continued fever is almost always more fatal, in proportion to the number of cases, than any general epidemic which appears in this country, seven of the above were either improper cases, or did not live twenty-four hours after admission. These laid aside, the number would be 1 to 18; while the stage and state in which others were admitted precluded all probable hope of recovery. As real utility, however, is and ought to be the object of this and every similar institution, such considerations must sink before it, except in so far as to show the necessity of early admission to secure the full benefit of the hospital, or as they may prove a stimulus to renewed exertion or more improved treatment.

Those who wish to assign one particular viscus as the primary seat of fever, from the appearance it assumed last season in Leeds, would have had no difficulty in determining it to the brain. That continued fever, especially as we have lately seen it, is, in a large majority of cases, attended with particular local excitement, and that this excitement is frequently first detected in the head is undeniable; there are, however, numerous instances, where two or three distinct organs are so simultaneously and equally affected, and others where the whole system seems oppressed without any specific derangement, that they must, under both circumstances, prove a never-failing stumbling-block to the Unitarian in the doctrine of first causes in this disease. If any organ which is liable to be affected in fever is weaker or more irritable than another, there, I conceive, *cæteris paribus*, will the local injury be found to commence; and there, too, shall we generally experience the greatest difficulty in its removal.

Having stated pretty fully, in the last report you did me the honour to insert, the general principles of the practice pursued, I shall scarcely advert to it at present. I have uniformly made it consonant with the symptoms. These were commonly in the commencement, and not unfrequently during the whole progress, evidently inflammatory. Venesection, as the principal means of cure, I have found beneficial exactly in the ratio of its early employment. When compelled to use it, in the advanced stage, to check urgent symptoms, I have sometimes been obliged to support the general powers of life by strong diffusive stimuli immediately afterwards. The recent work of Dr Benjamin Welsh, with others which have emanated from your metropolis and elsewhere, have settled, by the fiat of experience, the propriety and success of depletion in every stage where excitement exists. This seems now so universally acknowledged, that there appears as much necessity for a steady rudder as any additional sail to carry us safely through the waves of practice in fever.

Leeds, February 4, 1820.

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PART I.

ORIGINAL COMMUNICATIONS.

I.

RESEARCHES ON THE PATHOLOGY OF THE INTESTINAL CANAL.

By JOHN ABERCROMBIE, M. D. Fellow of the Royal College of Surgeons of Edinburgh.

PART III.

ON THE DISEASES OF THE MUCOUS MEMBRANE.

THE internal coat of the intestinal canal is to be viewed in the double light of a mucous membrane and an absorbing surface. It is in the former view that it is chiefly to be regarded as the seat of active disease; but it is evident, that such disease must influence in a great degree its function of absorption, and that this must have an important relation to the effects which will be produced on the system. The morbid conditions of it, which chiefly deserve our attention, are referable to inflammation, acute or chronic, and the various effects or terminations of inflammation, as thickening, erosion, and ulceration.

Sect. I.—*Symptoms of active Inflammation of the Mucous Membrane.*

As the disease at its commencement frequently excites little attention, the first symptoms are not well ascertained. When it comes under our view as an object of practice, we generally find more or less diarrhœa, with pain in the abdomen, which is sometimes extensively diffused over it, and sometimes confined to a particular part. It is usually increased by pressure, when the pressure is rather firm, but without that acute sensibility to a slight touch which attends inflammation of the peritonæum; it differs from peritonæal inflammation also, in being less affected by inspiration and by motion, so that the patient can often bear the erect posture with little inconvenience. The pain, in general, varies very much in degree, leaving long intervals of ease, and then occurring in paroxysms of violent tormina; these are generally followed by discharge from the bowels, but may take place without any discharge following them. In some cases, however, the pain is more permanent, so as more nearly to resemble the pain of enteritis. In general, there is frequency of pulse, with thirst, febrile oppression, and a brownish fur on the tongue; but, in some cases, the pulse is little above the natural standard through the whole course of the disease. There is frequently vomiting, but not urgent, and sometimes a peculiar irritability of the stomach, so that any thing taken into it excites a burning uneasiness, and this is usually followed by an irritation of the bowels, with a feeling as if the article which was swallowed almost immediately passed through them.

The evacuations from the bowels vary very much both in appearance and frequency. In some cases they are slimy, and in small quantity; in others, they are copious; sometimes they are watery and dark coloured; sometimes whitish; frequently yellow and feculent, as in a common diarrhœa; and sometimes articles of food or drink pass through nearly unchanged. They are in some cases extremely frequent, the patient being called to stool every ten or fifteen minutes; in others, the disease may be going on rapidly to a fatal termination, while the bowels are not moved above three or four times in the day. No diagnosis of the disease, therefore, can be founded either on the frequency of the evacuations, or on the appearance of the matters evacuated. In some cases there is tension of the abdomen, but in others this is wanting; and it may appear and disappear several times in the course of the same case.

With these varieties in the symptoms, the disease may go on for some time before its real nature is suspected; it may be considered as a common diarrhœa, and thus excite little attention and no alarm. In the farther progress of it there are considerable varieties. It may be fatal in one or two weeks, or it may extend to five or six, or it may pass into a chronic state, forming a disease analogous to that which has been called Lientery, and in this form may be drawn out to many months, and be at last fatal by very gradual exhaustion. Its fatal terminations in the active state are two, (1.) A peculiar rapid exhaustion, such as is not accounted for by the frequency of the evacuations, which often bear no kind of proportion to the constitutional effects that take place. (2.) By passing into peritonæal inflammation or enteritis. In this case the diarrhœa usually ceases a few days before death. The pain increases, with acute tenderness of the abdomen, often with vomiting and all the usual appearances of enteritis.

The diagnosis is often difficult. The disease should be suspected when there is diarrhœa with much pain, and the pain increased by pressure. If these symptoms are accompanied by fever, the case is still more suspicious, but fever, as I have already stated, is frequently wanting. The disease occurs both in an idiopathic form and as a symptomatic affection. In the latter case, it appears as an attendant on continued fever, and may either exist from the commencement of the fever, or may begin at an advanced period of it. It seems occasionally to accompany or follow other febrile diseases, especially measles, and there is reason to believe that it may supervene upon affections of the bowels, which, at first, were free from any dangerous character,—a case beginning like a simple diarrhœa, and after it had gone on for eight or ten days, the symptoms appearing which indicate this affection. In a less active form it follows many diseases of a scrofulous nature, forming a colliquative diarrhœa. The causes of the idiopathic cases are not well ascertained. It is sometimes ascribed to cold; in women especially to exposure to cold during the flow of the menses. It is probable, also, that it may be induced by acrid ingesta of various kinds, drastic purgatives in over doses, and by the mineral poisons.

The appearances, on dissection, vary considerably, according to the period of the disease at which the fatal event takes place. When this happens at an early period, we find the mucous membrane covered with irregular patches of inflammation, which are, in general, sensibly elevated above the level of the sound parts. They vary exceedingly in extent in different cases, in some ex-

tending over a great part of the canal; in others, being confined to a very small portion of it, frequently about the lower end of the ileum, or the head of the colon. They vary also in size, consisting, most commonly, of patches one or two inches in diameter, with sound portions interposed betwixt them, above which they are sensibly elevated. In other cases, but I think less frequently, a considerable extent of the canal is of a continued uniform redness.

The inflamed portions are in some cases covered by a brownish tenacious mucus; in others, by coagulable lymph, and frequently the surface of them is studded with minute vesicles, which, at a more advanced period, seem to pass into very small ulcers. In other cases small round portions of the membrane are observed of a grey colour and soft pultaceous appearance, are found to be easily separated, and to leave ulcers. In the cases which have gone on to a more advanced period, we find ulcers of various extent and appearance. In some examples, they are of the same colour with the surrounding parts, and merely appear as if a portion of the membrane had been dissected out. In other cases they are more decidedly ulcers, covered at the bottom with yellowish sloughs, often with elevated edges, and surrounded by a ring of inflammation, and sometimes penetrating to such a depth as completely to perforate the intestine. These different appearances seem to be different stages of the same disease; for we may sometimes observe one of these penetrating ulcers, surrounded by a larger circle of abrasion, without evident ulceration, and this by another ring of inflammation; this outer inflamed portion being probably covered by the very minute ulcers or small vesicles formerly mentioned. The appearances which I have now described seem to be the most common; but cases occur in which an extensive portion of the mucous membrane is black and gangrenous, and sometimes an extensive portion has been found to be separated, so as to expose the muscular coat, or even the peritonæal. Cases are also described which have recovered, after a portion of the internal coat had been thrown off in this manner, in one continued cylinder of great extent. The external surface of the intestine is sometimes healthy; in other cases there are spots of obscure redness corresponding to the inflamed portions of the mucous membrane. The cases which terminate by peritonæal inflammation or enteritis, have the appearances usual in these affections, and in the cases in which the ulcers penetrate the intestine, effusion of coagulable lymph, lividity, or gangrene, to a small extent, may often be observed on the outer surface, surrounding the perforations.

Sect. II.—*Of the Disease in Infants.*

Acute inflammation of the mucous membrane appears to be a frequent disease of infants about the age of six or eight months, and it forms a most interesting subject of research. The most important point in the investigation relates to the means of distinguishing the disease, in its early stages, from the ordinary bowel complaints of children about the period of dentition, and this is, in general, a matter of considerable difficulty. The principal point to be kept in view in the diagnosis is, that it is a febrile disease; the infant is usually hot and restless in the early stages, with thirst, and the tongue is dry, or covered with a brownish crust; there is, in general, a good deal of screaming and fretfulness; bad sleep; frequently vomiting; and, in many cases, pressure on the abdomen seems to give uneasiness. In many instances the disease assumes very much the appearance of the affection which has been called the remittent fever of infants, a term which I suspect has been applied to various febrile affections, which are merely symptomatic. The bowels are loose; but, as I have already observed, in regard to the disease in adults, the loosenes of the bowels is by no means a prominent symptom in every case; for, even in the advanced stages, the bowels may not be moved above three or four times in 24 hours, while the disease is advancing rapidly to a fatal termination. In other cases this symptom is more urgent; the evacuations are preceded by much restlessness and appearance of pain, and the matters evacuated are sometimes discharged with a singular force, so as to be propelled to some distance. The evacuations vary much in appearance, and I have not been able to satisfy myself that any reliance is to be placed on them in ascertaining the disease. They sometimes consist of a reddish-brown mucus, sometimes of a pale clay-coloured matter, and sometimes of a dark watery fluid; but, in many cases, they shew little deviation from the healthy state, while in many, their appearance is evidently disguised and modified by articles of food or drink, which pass through nearly unchanged. The disease, in fact, often goes on for some time without exciting alarm, or being distinguished from an ordinary diarrhœa, until attention is strongly and suddenly directed to the dangerous nature of it, by the occurrence of constitutional symptoms, which do not appear in the ordinary bowel complaints of children. These consist, in some cases, of a great degree of febrile oppression, with dry crusted tongue, thirst, and vomiting; in others of a very sudden and rapid exhaustion of the vital powers, which is unex-

pected, and is not accounted for by the frequency of the evacuations, and sometimes of the sudden appearance of coma, with a peculiar hollow languid state of the eye, and a pale waxen look of the whole body, while the pulse, perhaps, is of tolerable strength. These symptoms may appear while the disease has been going on for a short time, and the evacuations have been by no means frequent; while the disease, in a word, was not to be compared, either in its continuance or the frequency of the evacuations, with the ordinary bowel complaints of children, which often go on for a long time without producing any inconvenience.

The causes of the disease are not well ascertained. It frequently occurs about the period of dentition, and in many cases appears to be connected with weaning. The fatal terminations are either by a rapid and peculiar sinking of the vital powers, or by coma. On dissection we usually find the affection in what may be considered as the first stage. In various parts of the inner surface of the intestine, particularly the ileum, there are irregular patches of inflammation, slightly elevated above the level of the surrounding parts, and often covered with the minute vesicles, or minute ulcers, formerly mentioned. I have not seen it, as in adults, pass either into more extensive ulceration, or into peritonæal inflammation. Effusion in the brain is met with in the cases which terminate by coma. This termination is often preceded by a remarkable scarcity of urine, amounting, in some cases, nearly to a suspension of the secretion; but I have not ascertained whether this symptom be confined to the cases which terminate by coma.

Sect. III.—*Of the Chronic Form of the Disease.*

The disease, in its chronic form, may supervene upon the acute, or it may come on gradually without any acute symptoms. After it has continued for some time, we generally find the patient considerably emaciated, often with a peculiar withered look. There is an untractable diarrhœa, which, in some cases, is permanent; in others, occurs at short intervals, continuing for a few days at a time, and alternating with costiveness. In some cases the appetite is good, or even voracious; but, in general, it is variable and capricious, with indigestion and great uneasiness after eating, and sometimes every thing that is taken into the stomach produces a peculiar uneasiness, which passes downwards into the bowels, and is only relieved after repeated evacuations. If by opiates or astringents the diarrhœa be re-

strained, the uneasiness in the stomach is generally much increased, and in some cases vomiting is excited. In other cases, vomiting regularly alternates with the diarrhœa, the patient being for a few days at a time affected with frequent vomiting without diarrhœa, and then for a few days with diarrhœa without vomiting. Remedies given in such cases to alleviate the one lead to the other, or they may alternate without any interference. There is generally pain in the abdomen, but it varies much both in degree and duration; in some cases it only appears in the form of tormina preceding the evacuations; in others it is more permanent, and is increased by pressure.

The matters evacuated vary much in appearance, being sometimes fluid and feculent, frequently white, and sometimes composed of a mixture of half-digested articles, with the addition of recent bile, or a brownish mucus, which appears to be the production of the diseased surface. In some cases there are discharges of venous blood, which may either appear in the form of coagula, or as a dark pitchy matter, giving a dark colour to the whole of the matter discharged.

Some of the chronic cases appear to go on for a considerable time without much disturbance of the general health; but, in others, there is much weakness and emaciation; frequently hectic paroxysms; and sometimes a rawness or tenderness of the mouth and fauces, with aphthæ or minute ulcers, often accompanied by a tenderness of the œsophagus, and a painful burning sensation in the stomach after eating.

The appearances on dissection shew the disease in various stages. In some cases, even after the symptoms have existed for a considerable time, we still find it in the form of irregular patches of a fungous appearance, and a dark red colour, slightly elevated above the healthy parts. In others, we find distinct small ulcers, with round elevated edges, and sometimes more extensive irregular ulceration, with ragged edges. Frequently the coats of the intestine are thickened at the ulcerated parts, sometimes to such a degree as considerably to diminish the area of the intestine. In such cases, the ordinary symptoms of the disease are apt to alternate with attacks of obstinate costiveness, and they are frequently fatal by ileus. In some cases, instead of ulceration, the inner surface of the diseased parts is studded with numerous tubercles, of various sizes, and sometimes an extensive tract of intestine is found covered with smooth cicatrices of ulcers, which have healed. In some of these cases, the symptoms have continued, and gone on to their fatal termination in the usual manner. In others, this appearance is found after the symptoms have ceased, and the patient has died of

some other disease. Cases have also occurred in which the patients died of emaciation, after the symptoms had ceased, apparently from these cicatrices being so extensive as to interfere with the process of absorption.

Sect. IV.—*Examples of the principal Forms and Terminations of the Disease.*

§ I.—*The active Form of the Disease.*

Case I.—Many years ago, a woman, aged 25, was admitted into the Infirmary of Edinburgh, affected with pain over the abdomen, tenesmus, and diarrhœa. The pain occasionally intermitted, and was most severe upon going to stool, and on passing urine. The evacuations were free from scybalæ or blood. She had thirst, headach, some cough, nausea, and occasional vomiting, a pale emaciated look, pulse 72. Ascribed her complaints to cold; and they had been gradually increasing for three weeks. Various remedies were employed, without benefit, consisting chiefly of opiates, absorbents, and calomel. The disease went on for eight days more, with various remissions and aggravations.

2d day.—Two stools; severe tormina, which were relieved by fomentation.

3d day.—Nearly free from tormina; one stool, which seemed to consist of broth, which she had recently taken, little changed.

4th day.—Two scanty evacuations, without griping; abdomen hard and painful; vomited once; a mild enema produced a copious discharge, and relieved the tormina.

5th day.—Less pain; vomited several times; one stool, thin and feculent; pulse 78; took gr. vi. of calomel.

6th day.—Two stools; one of them thin and feculent; the other much tinged with blood; much pain before the evacuations; abdomen tense and painful; pulse 80; vomited a considerable quantity of slimy matter, tinged with blood, and having some pus mixed with it. Took gr. viii. of calomel.

7th day.—Two stools; thin, feculent, and of a natural appearance; preceded by much pain; vomited repeatedly some greenish slimy matter, mixed with bloody pus; less tension of the abdomen; pulse from 60 to 70. Took calomel with opium.

8th day.—No stool; and no vomiting. Died in the night.

Dissection.—The vessels on the stomach, duodenum, and jejunum, were unusually distended with blood. The ileum was livid, with some adhesions. Its internal surface was quite black; and it contained dark-coloured slimy matter, mixed with very fetid pus. The colon on the left side was livid, with adhesion to the abdominal pa-

rietes, and to the lower part of the omentum, which also was livid. Between these parts there was much fetid pus.

Case II.—A girl, aged 6, was affected with severe and obstinate diarrhœa, which reduced her to great weakness and emaciation. It continued from three to four weeks, and then subsided, and was succeeded, after a short interval, by severe pain in the belly, headach, and vomiting; the bowels being then rather bound; the pulse was from 30 to 40 in a minute; the urine was high-coloured, and much diminished in quantity. The headach continued with vomiting, and a constant spasmodic motion of the right arm and leg; and, after seven days, she sunk into coma, and died in two days. The pulse continued from 30 to 40 till a day or two before death, when it rose to 70 or 80. I did not see this case during the life of the patient, who was treated in the most judicious manner by an intelligent practitioner. I was present at the examination of the body. *Dissection.*—There was considerable effusion in the ventricles of the brain; and a lacerated opening in the septum lucidum, surrounded by a ring of inflammation. The inner surface of the ventricles was remarkably vascular, and in some places very soft and broken down. In the anterior part of the left hemisphere, a portion of the brain was darker in the colour, and firmer than natural, and contained some hard tubercles. The inner surface of the caput coli, and of a great part of the ascending colon, was of a dark red colour, and covered with numerous patches of a dark red fungus, which were considerably elevated above the level of the surrounding parts. The other viscera were healthy.

Case III.—A girl, aged 9, was seen by Dr Alison in December 1819, affected with the usual symptoms of contagious fever, which was prevalent in a narrow and crowded lane where she resided, and had affected a person in an adjoining room. From the commencement of the disease, she had diarrhœa, with griping, and considerable tenderness of the abdomen, and the evacuations were thin, feculent, and of a natural appearance. These symptoms continued, with frequent pulse, and foul dry tongue, till two days before her death, when the diarrhœa suddenly subsided, and was succeeded by violent pain, acute tenderness of the abdomen, and every symptom of peritonæal inflammation. The duration of the case was about three weeks. I did not see it during the life of the patient, but am indebted to Dr Alison for the above outline of it, and for an opportunity of being present at the examination of the body. *Dissection.*—There was considerable peritonæal inflammation, especially on the ileum, where there was extensive adhesion, with considerable deposition of coagulable lymph in flocculi. The adhering parts were also in several places perforated by small ulcerations, through which some feculent matter had escaped into the cavity of the peritonæum. The ileum being laid open, discovered a most extensive tract of disease, on its inner surface, the mucous membrane being extensively eroded, and in many

places completely destroyed, by round well-defined ulcers, some of which were as large as a shilling. The lower extremity of the ileum was the principal seat of these ulcers; but the disease extended over a great part of that portion of the small intestine; and, in several places, its coats were considerably thickened. The higher parts of the small intestine were healthy. The colon was collapsed, and externally healthy; internally there were in several places, especially on the left side, patches of inflammation on the mucous membrane; but they were slight and recent, and without any appearance of ulceration. The ileum contained a considerable quantity of fluid feculent matter, which was quite healthy in its appearance. In the higher part of the small intestine, there was a small quantity of dark-green viscid fluid, like inspissated bile. The colon contained only a small quantity of mucus, of a healthy appearance; other viscera sound.

As in this case there was considerable reason to believe that the original disease was contagious fever, the affection of the bowels may perhaps be considered as symptomatic. This occurred more distinctly in a case mentioned by Dr Duncan junior, in which the disease in the mucous membrane seemed to commence about the 23d day of the fever. The case was fatal in nine days more, and, on dissection, the disease was found nearly in the state of simple inflammation. At various parts of the mucous membrane, from the jejunum to the rectum, there were purple patches occurring, at first at intervals of an inch or two inches, and then running gradually more and more into each other, until, towards the termination of the ileum in the colon, the whole surface of the mucous membrane exhibited a deep purple hue. The mucous membrane of the caput coli had a similar appearance, but the arch was almost entirely free from it. It occurred again at the sigmoid flexure, and in the rectum, in addition to the venous congestion, numerous fungous looking patches presented themselves, from a quarter to half an inch broad, and elevated fully an eighth of an inch above the surface of the intestine. They had a very vascular appearance, but their surface was covered with a thin yellowish crust. This patient (a woman aged 60) seemed to be convalescent from fever with petechiæ, when about the 23d day of the disease she was attacked with diarrhœa without any complaint of pain,—the stools fetid and dark coloured,—the pulse varying from 80 to 100,—after six days she had considerable pain and bloody evacuations, and died exhausted on the 9th.

This symptomatic form of the disease is the affection which has lately excited much attention in France, under the name of Fièvre Entéro-Mésentérique, and has given rise to a very keen controversy in regard to the nature of it; one party contending that it is symptomatic of common fever,—the other

that it constitutes a peculiar species of fever, of which the affection of the mucous membrane is a primary and essential phenomenon. Numerous examples of it, in the state of simple inflammation, erosion, and ulceration, are described by Petit.*

The following cases afford striking examples of inflammation of the mucous membrane in various stages of its progress, and in forms which may probably be considered as idiopathic:

Case IV.—A girl, aged 5, had headach, anorexia, bad sleep, nausea, mucous vomiting, frequent pulse, dry skin, and pain of the abdomen, increased by pressure; bowels at first rather bound. Seemed much better after an emetic, and was thought convalescent for several days; but was then suddenly seized with violent looseness, which nothing could restrain; was rapidly exhausted, and died in ten days. The stools were liquid, greyish, and very fetid. *Dissection.*—The small intestines were discoloured, and on various parts of their surface, there were round red spots under the peritonæal coat, which corresponded with inflamed spots on the mucous membrane. The great intestine was of a "rose-violet colour," which was deepest towards the rectum; the serous membrane seemed inflamed, and the parietes thickened. Two inches from the valve of the colon, there was in the inner surface of the ileum a large round ulcer with irregular edges, the bottom greyish and rugous, and easily torn off. Near it there were three other ulcers of the same character, but smaller. The mucous membrane between these ulcers was pale, and covered with numerous small black spots, which extended through the whole thickness of it. They were also seen on the valve of the colon, and on the appendix vermiformis. The mucous membrane of the lumbar colon of the right side was of a pale rose colour, and covered with small black spots, each of which had a grey circle round it; these circles were formed of a soft pulpy matter, which was easily raised, and discovered ulcers well defined, as if a piece had been cut out, the black points coming off along with the pulpy matter. In the transverse colon, there were other ulcers in the mucous membrane, covered by a thick grey matter, and increasing both in breadth and depth; their edges becoming more and more elevated, hard and fungous, and of a violet colour. In the descending colon, the ulcers ran so into one another as to present nearly one continued surface of ulceration. The mucous membrane was not observed at all, but a close succession of deep irregular ulcerated excavations, separated by fungous eminences, which were covered with black and red spots. In some places the ulceration had extended so deep as to destroy the muscular coat. The cavity of the rectum was full of a grey ichorous fetid matter.†

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* Traité de la Fièvre Entéro-Mésenterique.

† Cloquet, Nouveau Journal de Medicine, Tome I.

This may be considered as an idiopathic example of this disease, fatal by that peculiar exhaustion which accompanies it, and which is much more rapid than simple exhaustion, depending merely upon the frequency of the evacuations. The following case affords an example of another termination of it, by the inflammation extending to the peritonæal coat.

Case V.—A girl, aged 7,* had symptoms similar to the preceding, and being treated upon the same plan, was considered as convalescent. After six days, she was seized with vomiting and copious diarrhœa, with constant acute pain in the abdomen, which was painful on pressure, but not enlarged. After eight days the pain suddenly increased, the belly became enlarged, with great sensibility, hiccup, vomiting, and all the signs of peritonæal inflammation, which in seven days was fatal. *Dissection.*—Peritonæal inflammation, with recent adhesions and serous effusion, in which there were flocculi of coagulable lymph. Near the end of the ileum, there was a round opening through which feculent matter had escaped. This opening had its origin in a large and deep ulcer on the inner surface of the intestine, much more extensive on the inside than the outside; its edges were elevated, hard and tubercular on the inner side, but thin on the outside. Near it were two other erosions of the mucous membrane, less extensive and less deep, and surrounded with black spots; other parts sound.

Case VI.—A girl, aged 9,† had obstinate dysentery for two months, and was reduced to extreme emaciation. The pain then increased, the belly became tender to the slightest pressure, with all the symptoms of peritonæal inflammation, which was fatal in 23 hours. *Dissection.*—Extensive inflammation and adhesion of the intestines to each other, and to the abdominal parietes on the right side. There were also many livid spots, elevated, with thickening, and some ulceration of the coats of the intestine. About the middle of the ileum there were three ulcers of the mucous membrane, similar to those described in the preceding case.

This extension of the inflammation from the mucous membrane to the other coats of the intestine, seems to be a frequent termination of the disease. I have formerly described a remarkable case of it; in which unmanageable diarrhœa, of two or three weeks duration, was succeeded by symptoms of enteritis, which was fatal in two days. (Part II. Case XIII.) It occurred also in Dr Alison's case, Case III. of this paper. I have already expressed doubts whether some of the cases which I formerly considered as peritonæal inflammation, may not

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* Cloquet, Nouveau Journal de Medecine, Tome I.

† Cloquet, *ut supra.*

have been really of this nature, particularly Cases II. and III. of Part II. In Case II. it is not improbable that inflammation of the mucous membrane had existed for some time, and that the disease was arrested by the treatment there described, when the inflammation was spreading to the peritonæum.

The colliquative diarrhœa of phthisical patients, and untractable affections of the bowels analogous to it, which supervene on various scrofulous diseases, seem to be often connected with inflammation and ulceration of the mucous membrane. In such cases I believe the ulcers are generally small, and sometimes the disease has not advanced beyond the state of chronic inflammation, with inflamed patches of a fungous appearance, a little elevated above the sound parts. In the following case the disease was in a more severe form.

Case VII.—A boy, aged 11,* had scrofulous disease of the left elbow-joint, for which he suffered amputation, and the stump healed favourably in sixteen days. About this time he was seized with pain of the breast and belly, and diarrhœa. The pulse was small and sharp; the tongue white; the belly was painful on pressure; the evacuations were copious, of a greyish colour, and fetid. He died in about three weeks.

Dissection.—There was effusion in the pericardium; the lungs were tubercular, and much diseased. The peritonæum was inflamed, and covered with lymph and miliary tubercles, like those of the lungs. The intestines were of a red-violet colour, with dark irregular spots. The inferior extremity of the ileum, the cæcum, and the sigmoid flexure of the colon, were pierced by small fistulous openings, which were surrounded externally by dark spots, and internally had their origin in large and deep ulcers of the mucous membrane, with elevated, reverted, and tubercular edges. They were most numerous in the large intestine, but did not extend to the rectum, the mucous membrane of which was only injected, and marked with red spots. In the inferior part of the cæcum there was a diseased mass, resembling the ulcerations, the size of a small egg. The mesenteric glands were enlarged, and contained soft tuberculous matter. The liver adhered to the stomach and the diaphragm, and on the omentum there were scirrhous granulations.

There are many other cases on record, which illustrate the phenomena of this important disease. A man, aged 60, whose case is described by Dr Duncan junior, was affected with diarrhœa, and pain about the umbilicus, which was not increased by pressure. The evacuations were frequent, yellow, and generally fluid, and were preceded by tormina; they were excited by taking food or drink. His pulse was natural, and his appetite good; but he was deterred from taking either food or drink,

* Cloquet, *ut supra.*

from the fear of inducing the diarrhœa. The disease resisted all the remedies that were used, and, without any particular change in the symptoms, was fatal in six weeks. On dissection, there were found marks of peritonæal inflammation; the descending colon and rectum were found much thickened; and, "at several places, the internal membrane of the intestines was partially, and at others entirely removed, marking the intestines as small-pox does the skin. In the cavity of the abdomen, about lb. vj. of a light yellow serum, with flakes of a similar colour." * A young man, mentioned by Morgagni, † was seized with tormina, with frequent bloody stools, which, after 15 days, was changed into a yellow diarrhœa, without tormina. This was soon followed by tertian fever, which terminated in a month. The diarrhœa still continuing, he was then seized with acute fever, which was fatal, with stupor, in 14 days. The termination of the ileum, and the commencement of the colon, were, for a considerable space, eroded, ulcerated, and in some places gangrenous on the inner surface. In many places, the intestine was perforated by the ulcers.

§ II.—*Examples of the Disease in Infants.*

Case VIII.—An infant, aged 6 months, (13th May 1817,) had been affected for about a week with looseness of the bowels, and occasional vomiting. The complaint was considered as the common bowel complaint of dentition; but the stools were scanty, offensive, and dark-coloured, and though they were not very frequent, there was frequently observed a considerable tendency to sinking, with paleness and coldness of the body. After several days, the stools became natural, the vomiting ceased, the appetite returned, and the looseness was extremely moderate. These favourable appearances, however, were of short continuance. On the evening of the 18th, the looseness suddenly increased; it was excited by every thing that was taken into the stomach, and the articles taken seemed quickly to pass through. On the morning of the 19th, I found her pale and exhausted; and though the looseness was checked by opiate injections, every attempt to support her was in vain. She died in the afternoon, having lain through the day in a state of oppression resembling coma.

Dissection.—The bowels were externally healthy, except some spots of superficial redness. On the inner surface of the small intestines there were, in many places, irregular patches of inflammation; and, in other places, there were spots of limited extent covered with

* Clinical Reports, p. 133. † De Causis et Sedibus, Ep. XXXI. § 2.

minute ulcers. These spots were whitish, or ash-coloured, of a honeycomb appearance, and were slightly elevated above the level of the surrounding parts; and on the external surface of the intestine, corresponding with several of them, there were the spots of circumscribed redness, or increased vascularity. The mesenteric glands were enlarged; other viscera healthy.

Case IX.—An infant, aged 7 months, soon after weaning, was suddenly seized with vomiting and purging: was oppressed, fretful, and feverish: the stools were scanty and varied in appearance, being sometimes brownish, and sometimes pretty natural. After a day or two, the vomiting ceased; the looseness continued, not severe, nor very frequent, but accompanied by much oppression and feverishness, a brown fur on the tongue, and a remarkable dryness of the gums; the stools varying in appearance as before. Various remedies were now employed with little benefit. After four or five days, the child became comatose. This was relieved by blistering on the neck, and a purgative of calomel. The stools then became green, but generally scanty and watery. The febrile state continued, with the fur on the tongue. The child sunk gradually, with oppressed breathing, and died on the 9th day.

Dissection.—The bowels externally appeared healthy, except that on various parts of the small intestines there were spots of redness, which had not the appearance of superficial inflammation, but of red surfaces situated beneath the peritonæal coat, that coat itself being healthy. At the parts corresponding with these spots, the inner membrane was elevated into irregular patches of inflammation, and the inflamed surfaces were covered by very minute ulcers. In the neighbourhood of these inflamed portions, the mesentery was unusually vascular. The colon was collapsed, and externally healthy; its inner surface presented an unusual appearance, being in many places covered by very minute vesicles, scarcely elevated above the surface of its inner membrane, but shining through it, clear, transparent, and watery; they were most numerous in the caput coli, but were observed through the whole course of the colon; and they were the only morbid appearance in the colon, there being no vestige either of inflammation or ulceration.

These two cases will serve to exemplify the disease as it occurs in infants. The following case, for which I am indebted to Dr Oudney, exhibits the disease at a more advanced age.

Case X.—A girl, aged 3 years, was attacked about three weeks before her death with vomiting, frequent calls to stool, and uneasiness in the abdomen; the evacuations were reported to have been frequent, slimy, and fetid. After eight or ten days, when Dr Oudney first saw her, she had frequent irregular febrile paroxysms; the abdomen seemed to be painful on pressure; she had frequent stools of a clay colour, and she vomited often; her tongue was white; there was urgent thirst, especially during the febrile paroxysms. In this

state she continued until a few days before death, when she became oppressed, and partially comatose; screamed frequently, and expressed great unwillingness to be moved. The febrile exacerbations still continued, the pulse varying from 130 to 150, and she had frequent stools, which were now of a dirty green colour, mixed with specks of yellow. The pupil was natural, and continued sensible to light until a few hours before death, which happened on 8th February 1820. *Dissection.*—The ileum, from its termination in the colon to near the jejunum, was highly vascular, its minute vessels appearing as if injected. Its mucous membrane was covered with numerous irregular inflamed patches, which had a fungous appearance, considerably elevated above the level of the sound parts, and covered with small ulcerations. Some of these patches were the size of a shilling, others smaller, they were generally at the distance of an inch or two from each other, and the membrane in the intervals was healthy. The mesenteric glands were greatly enlarged, and very vascular.

§ III.—*Examples of the Chronic Form of the Disease.*

Case XI.—A lady, aged 35, died in April 1818, after having suffered for nearly four years from a diarrhœa which had resisted every remedy. I saw her a few weeks before death, and found her pale, withered, and emaciated, with frequent pulse, slight cough, and considerable uneasiness in the abdomen. The diarrhœa occurred several times every day, and the stools were thin and feculent, and not unnatural in their appearance. At the commencement of the complaint she had suffered much from pain in the bowels, and occasionally through the whole course of it, but it was not constant, nor confined to any particular part. A variety of remedies had been employed at different times, and frequently the disease had been restrained by them for some time, but it always returned after a short interval with the same violence as before. She had no vomiting, the cough had begun within the last year of her life, and was never severe. For some time before her death she had aphthæ of the throat. *Dissection.*—The bowels were externally healthy, except in several places of the small intestine, large spots of a dark red colour, which seemed to be deep-seated, as if shining through the peritonæal coat. At the places corresponding with these spots, the mucous membrane was elevated into patches of a fungous appearance and dark red colour, and on these portions there were numerous small oval ulcers, the bottoms of which were smooth and pale, while the parts around were of a dark red. At these ulcers, the intestine, when held up to the light, was semitransparent, they were found wherever the dark fungous appearance existed, and this was on a considerable part of the small intestines in irregular portions, some of which were six or eight inches in length. The colon was externally healthy; internally, there were many small ulcers, which had a different character from those on the

small intestines. They were more distinctly ulcerated at the bottom, few of them larger than the diameter of a split pea, but each surrounded by a firm elevated margin, and there was no discoloration of the surrounding parts. They were chiefly observed in the ascending colon and the arch. On the inner surface of the stomach, near the pylorus, and of the œsophagus through its whole extent, there were observed numerous very small erosions, of an oval shape, and scarcely larger than the diameter of a pin-head. The lungs were tubercular, and in the left lobe there were several small abscesses. The other viscera were sound.

In this case I think it probable that the original disease was in the colon, where the ulcers appeared to be of long standing. Those in the small intestine were probably more recent. The following case shows the disease in a more violent form:

Case XII.—A girl, aged 13. Her complaint began about a year before her death, with pain of the abdomen and frequent vomiting. The bowels were at first natural, but soon became loose; and from that time she was almost constantly affected either with diarrhœa or vomiting, and sometimes with both at once. She became gradually emaciated, but was not confined to bed until a month before her death, which happened in June 1814. When I saw her about a week before she died, she was emaciated to the last degree, with some cough, and a small frequent pulse. She had still frequent diarrhœa and vomiting, and complained of constant pain in the bowels, which was increased by pressure, but the abdomen was soft and collapsed. *Dissection.*—The caput coli was dark-coloured, hard, and much thickened in its coats; internally, it was much eroded by ulceration, and the disease extended in the form of numerous smaller ulcers, about three inches along the ascending colon. The valve of the colon was destroyed by ulceration. The lower end of the ileum, to the extent of about eighteen inches, was distended, thickened in its coats, externally of a reddish colour, and internally covered by numerous small ulcers, varying in size from the diameter of a split pea to that of a sixpence. They were clean and well defined, as if a piece had been cut out. The lungs and all the other viscera were healthy.

Case XIII.—A boy, aged 12,* about eighteen months before his death, suffered for some time from severe and obstinate diarrhœa, and from that time he was much troubled with pain in his bowels, and was liable to occasional diarrhœa, and to vomiting. The vomiting occurred especially after a full meal, and he suffered occasionally from pain in the lumbar region, which was aggravated by the erect posture. On the 22d May 1819, he had severe pain in the lower part of the back, but did not complain of his belly, and there was

* London Medical Repository for December 1819.

neither fulness nor tenderness of the abdomen. Pulse 120. Bowels had been moved four times the day before, and once in the night. (23d.) Pulse 100; pain abated; no stool; sunk rather unexpectedly, and died in the night. *Dissection.*—A part of the ileum was found much contracted, and its coats much thickened. Above and below this part, there were small ulcers of a honey-comb appearance, with hard and thickened edges; the surface of them was of a dark cineritious appearance, and the coats of the intestines felt hard and knotty. The inner surface of the strictured part was also ulcerated. Below this part, there was a portion of a dark livid colour, and below that, another contracted and indurated part, which occupied the last three inches of the ileum. In this part there had been numerous ulcers, some of which had healed and left hard cicatrices, and the whole inner surface of this portion was puckered, ragged, and irregular, and the area of the intestine very much contracted.

It is by the thickening of the intestine which occurred in these cases, at last destroying the muscular action, that the disease is sometimes succeeded by obstinate costiveness or ileus. A gentleman, whose case was communicated to Dr Monro by Dr Sanders, had been liable for twenty years to heartburn and occasional vomiting, and generally had five or six liquid stools every day, which were sometimes slimy and streaked with blood. He was afterwards affected with such obstinate costiveness that he had no stool for nine days. After this the diarrhœa returned, with vomiting, and he died at last with great distention of the abdomen and costiveness. The intestines were found extensively adhering to each other; and an extensive portion of the ileum was distended, very much thickened in its coats, and internally covered with various tumours, indurations, and ulcers. *

The following case shows the state of the disease, when the patient died of another affection, while the symptoms were going on.

Case XIV.—A man, aged 72, was affected with diarrhœa, and acute lancinating pain in the abdomen; he had voracious appetite and good digestion. Various remedies were employed without benefit for four months and a half, at which time he was seized with an affection of the brain, and died comatose in six days. *Dissection.*—Extensive serous effusion in the brain, and a suppurating tumour in the right hemisphere. On the small intestine there were some adhesions, and many dark spots. The middle part of it adhered to the left side of the colon at its lower part, and at this place a free communication had taken place between them by a ragged irregular open-

* Monro's Morbid Anatomy of the Gullet, p. 306.

ing, with loose ragged edges. There were numerous ulcers in various parts of the mucous membrane of the small intestine, which corresponded with the dark spots on the outer surface. These ulcers were round, with elevated edges; the bottom of them was grey, unequal, and covered with mucus. *

The symptoms may be equally severe, though the disease be less extensive. A woman, above 30 years of age, had been for some time affected with pectoral complaints, and a fixed pain in the umbilical region. She had then, after repeated injuries from falls, a pain in the left lumbar region, which prevented her from sitting, though she was able to walk. This continued three months, and was succeeded by amenorrhœa, with hemorrhage from the anus. This ceased after three months, the menses returned, and she was affected with diarrhœa. The diarrhœa ceased, and was succeeded by a grey discharge from the vagina, which continued for several months, and was succeeded by intermittent fever. This succession of disorders terminated in diarrhœa, which continued a year, and was then fatal. The evacuations were accompanied by severe pain, and consisted of various matters, mucous, ropy, and shreds of membranous concretions, and for two days before death much blood was discharged. *On dissection* the lungs were found adhering extensively to the pleura costalis; the liver was grey, red, and white, the latter colour predominating. The heart was a third smaller than usual. The commencement of the ileum was black, and the mucous membrane of this portion showed a cancerous ulceration. †

These cases will be sufficient to illustrate the disease in its most common forms, terminating by ulceration of various extent, and, in some cases, accompanied by thickening of the coats of the intestine. In the following case, in which the disease was of considerable standing, it had not advanced to ulceration.

Case XV.—A gentleman, aged about 50, had been for several years liable to looseness of his bowels. It attacked him most frequently in the night time, and often obliged him to get up several times in a night. His general health, however, was not much affected till a few months before his death, when the diarrhœa became more severe, and resisted every remedy. His strength sunk; he became pale and emaciated: with bad appetite and bad digestion; and died gradually exhausted. *Dissection.*—The liver was enlarged, pale, and tubercular. The intestines were externally healthy. Internally, the mucous membrane was in many places elevated into portions of a

* Cloquet, Nouv. Jour. de Medecine, Tome I. p. 29.
† Pinel. Médecine Clinique, p. 254.

dark red colour, and fungous appearance. These portions were observed through the whole tract of the intestine, generally in broad rings, going quite round the intestine, with intermediate portions of a healthy appearance. They were most numerous in the small intestine. No ulceration was observed in any part.

I shall only add one other case, showing the state of the parts when the symptoms had ceased after long continuance, and the patient died of another disease.

Case XVI.—A lady, aged 24, had been of a feeble and delicate habit from her early years; but, from the age of 15 or 16, had been almost constantly in a valetudinary state; was generally confined the whole winter with cough, pain of her bowels, and diarrhœa; got a little better during the summer, but was constantly, more or less, affected with diarrhœa and occasional pain in the bowels; variable appetite, bad digestion, and general debility. In this manner she had passed six or seven years, when she came to Scotland in summer 1815. She was then much emaciated, with a constant loose state of her bowels; the evacuations were fluid and whitish, and usually occurred four or five times every day. When at any time they were less frequent, she became oppressed about the stomach, and extremely uneasy. She had frequently pain in the bowels; her appetite was bad; the pulse natural. In the winter the same state of her bowels continued, and she had a loud noisy cough, without expectoration. In summer 1816 she began to improve considerably, having appeared to derive benefit from large doses of the tinct. muriat. ferri, combined with tincture of hyosciamus. The bowels got into a more natural state; the stools became consistent and healthy, and from this time there was no return of the former state of her bowels; but her appetite was bad, with very bad digestion, and she made little improvement either in flesh or strength. In the following winter her cough returned, at first without expectoration; but afterwards she had pain of her breast; frequent pulse, and purulent expectoration, and died of phthisis in May 1817, without any complaint in her bowels. *Dissection.*—The lungs were extensively tubercular, with numerous small abscesses. The lower half of the stomach was contracted, and considerably thickened. The pylorus also was a little thickened, but not hardened. On the internal surface of the intestines, there were many portions, several inches in extent, of a dark red colour, and more vascular than the other parts; and, on many places, there was the appearance of small, smooth cicatrices. The other viscera were healthy.

Besides the various forms of the disease which are exemplified in the above cases, there are some others which are deserving of notice. One appearance has been observed which does not occur in any of the cases which I have mentioned, I mean small tubercles or pustules resembling small-pox, covering the mucous membrane. This appearance has been observed by Petit, and

Lieutaud refers to several examples of it. I have also to add, that the disease sometimes terminates by peritonæal inflammation in a chronic form. In these cases we find the usual symptoms, untractable diarrhœa, going on for a long time, or alternate diarrhœa and vomiting, and besides the usual appearances in the mucous membrane, we find the intestines extensively glued together by very firm adhesions of long standing. A case of this kind, in a child three years of age, is mentioned by Mr Howship. The first symptoms were diarrhœa, impaired appetite, pain of the belly, irregular feverishness, and emaciation. After two months the diarrhœa subsided, the stools being not more frequent than natural, but the emaciation increased, with pain and tumefaction of the abdomen, and constant fever. The child was thus cut off by rapid exhaustion; the bowels, for a short time before death, being rather bound. On dissection all the intestines were found glued together into one mass by most extensive deposition of coagulable lymph; the villous coat of the small intestine was in several places destroyed by ulceration, and at one place there was a perforation a quarter of an inch in diameter.

The symptoms and morbid appearance which have been mentioned seem to form the leading phenomena of this important class of diseases, as far as they have been hitherto ascertained. But much observation is required to make us fully acquainted with the subject. It is probable that the disease exists in a much more limited degree than in the cases which have been described, and accompanied by symptoms which are much less defined. It is probable, also, that there are important varieties of the symptoms, depending on the seat of the disease, particularly in regard to the degree in which the stomach is affected. There seems to be one form of it in which vomiting is the prominent symptom, especially in the early stages. There is much reason to expect, that an accurate investigation of the subject will throw much light upon many affections which are at present involved in much obscurity, and which are often indiscriminately classed together under the very indefinite term, *disorders of the chylopoietic viscera*. A gentleman, aged 34, who had formerly suffered from dysentery, but had been free from any symptom of it for several years, was observed to look ill, and to lose flesh, without any defined complaint, except nausea and indigestion; his spirits were depressed; and his bowels were irregular, being sometimes loose, and sometimes the reverse. After several months had passed in this manner, he had frequently vomiting, and a distressing sensation of heat in the stomach and œsophagus. He sometimes took food with eager-

ness, and sometimes refused it. His pulse continued natural until three days before his death; he then had convulsive affections and delirium, with frequent pulse, and died in a state of coma, which continued about 12 hours. His death happened about a fortnight after the commencement of the vomiting. On dissection, all the viscera were found perfectly healthy, except about 18 inches of the lower extremity of the ileum. The coats of this portion were livid, and several indurations might be felt through it. Its internal surface was covered with ulcers of various sizes, from the size of a bean to that of a half-crown piece; these were circumscribed, but very rugged, from a great quantity of fungous substance thrown out both from their surfaces and edges.*

A woman, aged *55*, was affected with weakness, emaciation, and loss of appetite, without any fixed complaint, except occasional colic pains, which were transient and very slight, and discharge of blood by stool, which was considered as hæmorrhoidal. After she had been affected in this manner for six months, she became suddenly comatose, and died on the following day. On dissection, no disease could be detected in the brain. Nearly the whole extent of the rectum was occupied by a cancerous ulceration. The remainder of it, and the left side of the colon, were red, and purple, as if sphacelated. The other viscera were sound.†

Sect. V.—*Pathological Conjectures.*

The effects of inflammation on the mucous membrane of the intestine appear to be, morbid sensibility, with increased secretion of mucus, and morbid irritability of the muscular fibres which are connected with the inflamed part. The part thus affected seems to be excited to increased contraction by the ordinary mild contents of the canal, in the same manner as, in its healthy state, it would be excited by acrid contents, or by its appropriate stimulus, purgative medicine. Now the symptoms produced by such a morbid condition will vary considerably, according to the seat and the extent of the disease; for, if we suppose the healthy contraction and dilatation of the canal to be going on in the usual manner, propelling downwards the usual contents, it is probable that the increased action will only commence when these arrive at the part which is inflamed; hence the affection differs remarkably from a general increase of the peristaltic motion; because the parts above do not participate in

* Memoirs of the Medical Society of London, Vol. VI. p. 128.
† Pinel. Medecine Clinique, p. 257.

it. For the same reason, there is probably a diversity in the symptoms, according to the kind of contents which are present. If these are fluid, they seem to be received into the inflamed parts, and instantly transmitted by a violent contraction; but, if they are solid, and of any considerable dimensions, and consequently requiring for their transmission a greater dilatation than is required for fluids, the effect probably is, such a sudden and violent contraction, on the first contact, as rather resists their transmission into the inflamed part, and causes them to be retained in the part immediately above. Hence probably arise remarkable diversities in the symptoms, according as the disease may be confined to the region usually occupied by consistent feces, or may extend into the region of fluid feces, or into the higher regions, where the process of digestion is not completed. In the first case, the discharge probably consists chiefly of the secretion from the diseased parts, while the natural feces are retained; in the second, of healthy fluid feces; in the third, of articles of food or drink, partially changed, mixed with the biliary and other secretions, and varying considerably, as one or other of these articles may predominate in quantity at different times. If this view of the subject be correct, it will present to us such extensive sources of variety in the appearance of the matters evacuated, as must shake our confidence in them as a ground of diagnosis; and it is the high importance of this point, in a practical view, that has led me into these observations. That such diversities do occur, even in the most formidable states of the disease, appears from the cases which have been described. In some of them, though they were advancing rapidly to a fatal termination, the evacuations did not differ from the matters discharged in a simple diarrhœa; and, in Case III. the ileum, which was the principal seat of the disease, contained fluid feces in considerable quantity, and of a perfectly healthy appearance, in immediate contact with the diseased parts. Besides the sources of variety now referred to, there are others which may result from the period of the disease in particular cases; for, by repeated copious evacuations, the canal may be cleared of feculent matter, especially in a case in which appetite and digestion are much impaired. In such a case, the evacuations might be first copious and feculent, afterwards scanty, and consisting chiefly of the secretions from the parts, or watery matters, taken as drink, might pass through, tinged by these secretions. The important practical principle which I wish to found upon these observations is, that this highly dangerous and insidious disease may go on with every variety in the appearance of the evacuations; and that it may be advancing ra-

pidly to a fatal termination, while they do not differ from the matters discharged in a simple diarrhœa.

In the preceding observations I have abstained from any allusion to dysentery. The cases from which the descriptions were taken were not considered as cases of dysentery; but, it is evident that many of them show a remarkable affinity to it. On this important subject I cannot speak from experience, and would, therefore, express myself with becoming diffidence; but I would hazard a very few remarks in connection with the subject of this paper. In talking of dysentery, I think we are too much in the habit, in this country, of applying that name to an affection which is distinguished by tenesmus, with scanty discharges of mucus, often bloody, while the natural feces are retained, or discharged in scybalæ, and our principal systematic writers have employed the term in the same sense. But many of the best practical writers on dysentery describe two forms of the disease, which, in regard to the appearance of the matters evacuated, differ remarkably from each other; in the one they are scanty, and consist chiefly of mucus; in the other they are copious, and vary exceedingly in appearance at different periods of the disease, being sometimes dark, watery, and sanious, and sometimes quite natural. Sir James M'Grigor has particularly remarked, that the tropical dysentery, which was so fatal to the troops under his inspection, differs remarkably from the dysentery of Cullen, and ought rather to belong to a class of diseases which he has classed with diarrhœa. "I have ever (he adds) found difficulty in distinguishing dysentery from diarrhœa; and I am inclined to think, that, in Cullen's definition of diarrhœa, is described tropical dysentery."* The testimony of Dr Ballingall is strongly in favour of the same important fact.† In his description of that most formidable modification of the disease, which he has termed Colonitis, he expressly describes the evacuations as being, in the early stage of the disease, generally copious, of a fluid consistence, and without any particular fetor; and, in a private communication, in reply to certain queries which I addressed to him on this subject, he states, that, "at this period of the disease, the evacuations differ only in consistence from natural feces. As the disease advances, important changes generally take place in this respect, the evacuations becoming more scanty, and of a morbid appearance;" that is, probably, after, by repeated evacuations, the canal has been emp-

* M'Grigor's Medical Sketches, p. 184.
† Ballingall on the Diseases of India.

tied of healthy feces, and the subsequent discharges consist chiefly of the morbid secretions from the diseased parts.

Now, in the dysentery of Cullen, as described by Sir John Pringle and Dr Donald Monro, the primary and chief seat of the disease appears to have been the rectum and the lower part of the colon,—in many cases the rectum only; while, in the affection described by Dr Ballingall, the disease, in general, extended as high as the caput cæcum, which, in many cases, seemed to be the principal seat of it, and frequently into the small intestine. I have received an interesting communication to the same effect from Dr Oudney, who, while a surgeon in the Royal Navy, had extensive opportunities of observing the disease in various parts of the world; and I am indebted to him for two dissections of patients, who died of dysentery, with copious stools, the one in an acute, the other in a chronic form. The former was fatal in about five weeks, the stools having been generally copious, and varying very much in appearance, being sometimes slimy, sometimes watery, and sometimes consisting of mucus, mixed with green matter of various shades. There was fever, with rapid emaciation; at first acute pain, afterwards changing into a dull uneasiness over the lower part of the abdomen; and, towards the conclusion, there was a sharp pain, increased by pressure, confined to a small spot in the lower part of the abdomen, towards the right side. There were some superficial ulcerations towards the lower extremity of the colon, but the principal seat of the disease appeared to be the caput coli, in which there were numerous glandular projections, with ulcerated surfaces, and in the ileum, four inches from its lower extremity, there was a portion in a state of recent inflammation, covered with coagulable lymph. There were small abscesses in the liver, and the mesenteric glands were enlarged. The other case passed into the chronic form, and was fatal in four months; the stools having been at first scanty, afterwards copious. They varied very much in appearance, being sometimes very white, sometimes quite natural, and sometimes composed entirely of mucus of a bright brick colour. Towards the conclusion they become very copious, watery, and of a chocolate appearance, often with coagula of blood. The inner surface of the small intestine was covered with innumerable red points; the inner surface of the colon was covered throughout with irregular superficial ulcers. The liver was somewhat enlarged and firm, with one small tubercle in its posterior part. The vessels of the intestines, omentum, and mesentery, were much loaded with blood, and the small intestines contained a small quantity of natural feces.

In referring to the terminations of this disease, I have mentioned a singular fact in regard to it, in infants, a tendency to terminate by effusion in the brain. To call this a translation of the disease, is merely expressing the fact in other words, and leads to no principle whatever; but it is a curious subject of investigation, whether this be an accidental combination, or whether there be any principle to which it can be referred. I have, in a former paper, alluded to a remarkable connection betwixt effusion in the brain, and suspension or great diminution of the secretion of urine, such as occurs in the ischuria renalis. Now, all inflammatory affections of the abdomen are apt to derange the secretion of urine, especially in children, and it is a matter of fact, that a remarkable diminution of it often occurs in this disease, and has been frequently observed to precede the appearance of coma. What is the connection here we know not, and probably never shall know, but that ischuria renalis is followed by effusion in the brain, I consider as a pathological principle, or rather a pathological fact, which is perfectly established. It presents an interesting subject of investigation, whether this principle has any reference to the connection which has often been observed in children, between affections of the bowels and effusion in the brain.

Sect. VI.—*Outline of the Treatment.*

The active form of the disease, especially in its early stages, is to be considered as an inflammatory affection of the most dangerous kind, and requiring to be treated with activity by the usual remedies—especially bloodletting. The first urgency of the inflammation being thus subdued, if the pulse continue frequent, digitalis is given with much advantage, or Dover's powder, in repeated doses; and, after the necessary bleeding, moderate opiates may be given, with mucilaginous articles and absorbents, or opiate glysters. The effect of purgatives is extremely ambiguous. In the more severe cases, they evidently aggravate the symptoms. There may be cases in which it is expedient to evacuate the bowels, as when the discharges are scanty and slimy, with retention of natural feces, but the practice requires caution; and in the more common form of the disease, with copious discharges, they appear to be injurious. Though the evacuations in such cases may be of an unnatural appearance, it is to be remembered, that this is the result of morbid secretions, not to be corrected by purgatives, but by curing the disease on which they depend. When the disease appears to be

seated in the lower part of the great intestine, bleeding from the hæmorrhoidal vessels might probably be useful. When the tormina are severe, with tension of the abdomen, the tobacco injection might probably be employed with benefit. Great attention should be paid to the ingesta; to keep them in as small quantity as possible, and of the mildest quality.

It is in infants that the disease most frequently occurs to us; and there is some difficulty in determining what is the best treatment. This results from the difficulty of distinguishing the disease, so that, when a case terminates favourably, we cannot say, with certainty, that it really was an example of this dangerous affection. In some cases, in which there is no vomiting, a gentle emetic seems to be useful in the early stages; afterwards, Dover's powder, combined with chalk, opiate glysters, opiate frictions, opiate plaster, and tepid bath. In some cases, the free use of digitalis seems to be extremely useful, and blistering on the abdomen. It is worthy of consideration, whether topical bleeding would be admissible in the early stages, when the disease exhibits much activity. In the advanced stages, when there is a tendency to sinking, wine is to be given very freely; when there are threatenings of coma, blistering on the neck should be employed; from both these conditions, infants often make most unexpected recoveries. When the case is accompanied, as it often is, by a peculiar and most ungovernable vomiting, blistering on the epigastrium seems to be the most effectual remedy; and considerable benefit, on settling the stomach, is often obtained from the vegetable bitters, as the powder of colombo root, in doses of a few grains, repeated at short intervals. In the protracted bowel complaints of infants, in which there was reason to apprehend this affection in a chronic form, I have found nothing so useful as lime-water. The teeth are to be attended to, and the gums cut, when they appear to be giving irritation.

In the chronic form of the disease, what we have to contend with is either the chronic fungous inflammation, or ulceration. The treatment is extremely precarious, and very few of the cases end favourably. The remedies to be kept in view, and which appear in some cases to be useful, are chiefly the following: Lime-water, the vegetable bitters, and astringents, especially the cortex cusparie and logwood; preparations of iron, as the tincture of the muriat in large doses; small quantities of mercury, with opium; the resins, as turpentine and bals. copaivæ, combined with opium; sulphur with opium; repeated blistering on the abdomen; bandaging with a broad flannel roller; the tepid salt water bath.

A lady, aged 30, came under my care in spring 1813, affected in the following manner: She had a remarkable tenderness of the inside of the lips, the tongue, and the throat; a constant discharge of saliva; a burning uneasiness in the tongue, throat, breast, and stomach; and great uneasiness in swallowing, and for some time after it. She had a constant tendency to diarrhœa, and a feeling, as if food or drink did not remain in the stomach, but passed immediately into the bowels: there was some cough, frequent pulse, great debility, and increasing emaciation. The throat appeared raw, and a little inflamed. The edges of the tongue, and the inside of the under lip, were excoriated, and covered with small ulcers, with inflamed margins. There was a painful excoriation about the anus and the labia. The complaint was of about three months standing, and had begun while she was in the puerperal state in England. A great variety of practice was employed without the smallest benefit. She became wasted and debilitated to the greatest degree. The diarrhœa became incessant, with violent pain, and a feeling as if every thing she swallowed passed through her immediately. She had no relief, but from large opiates; and that relief was but slight and temporary. When the case appeared to be hopeless, she began to take a decoction of logwood, (℥i to lb. i. a wine-glassful four times a day,) with opiates, wine and nourishment. From this time she recovered daily, and in two or three weeks was in perfect health.

II.

Case of Aneurism in the Axillary Portion of the Left Brachial Artery, in which Ligature of the Subclavian was successfully performed. By Robert Liston, Surgeon, Teacher of Anatomy and Surgery, &c. &c. Edinburgh.

On the 31st March 1820, I was asked to see the subject of the following case,—Alexander Gibson, a coachman, aged 35. A soft tumour, the size of a small melon, and of a conical form externally, was situated rather above the level, immediately under and closely in contact with the left clavicle. The pulsation through the whole of it was most distinct, and seemed to extend even above the bone. It could be almost entirely commanded by firm compression with the finger on the vessel at the side of the neck; but all attempts of this kind, after he came under my care, were abstained from on account of the excruciating agony produced by them. The pain thus

caused had previously deprived him entirely of rest; indeed, the paroxysms were so extremely violent, that he could sometimes be with difficulty retained in bed. The whole arm and fore-arm were benumbed, the hand slightly œdematous, and the circulation in the limb very feeble. The constant torture, greatly aggravated at night, referable to the stretching of the axillary plexus of nerves over the parietes of the tumour, increased by the frequent handling and pressure, had almost entirely made sleep a stranger to him for many weeks. He enjoyed a little rest only after being quite worn out and exhausted by suffering, and with the assistance of from two to three drachms of laudanum. His shrieks are described by his wife to have been dreadful, so as even to alarm the neighbourhood.

The origin of the disease he refers to a fall from the high foot pavement upon the street five months ago, in which he pitched on the shoulder. Since that time he has complained of what he supposed to be rheumatism in that extremity. The tumour was only perceived six or seven weeks ago, during the process of rubbing the parts with some anodyne. It was small comparatively at that time, but has made its way gradually towards the clavicle, where little resistance is afforded by the loose fatty matter betwixt that bone and the pectoralis minor. The variety of medical men who have seen him, and the consultations on his case, have been innumerable. For some time he has been confined to the horizonal posture, bled repeatedly, purged, and religiously starved, according to the plan of Valsalva. So strictly was this fast observed, that, at one time, to abate his thirst, he was allowed only two oranges during twenty-four hours. Nevertheless, in spite of all this severe discipline, the tumour increased with great rapidity, and seemed to be extending above the clavicle, which it had very considerably displaced upwards. When he came under my care I immediately proposed the operation as his only hope of life, at the same time representing the chances for and against him. He instantly agreed to it, but insisted on its being delayed to the 3d of April, which I unwillingly consented to.

On that day, having placed my patient in a proper light, with his head slightly raised by pillows, I commenced my operation by a division of the integuments immediately above the clavicle, in a line with it, and about two and a half inches long, and another incision on the outer side of the sterno-mastoid muscle of one inch and a half, falling perpendicularly upon the middle of the first. The two flaps were then dissected back so as to expose the external jugular vein, which, as lying in the way, was cut across, and the lower orifice (that pointing upwards)

which alone bled, secured. Though I had determined to tie every vessel of consequence as I went along, still I was unwilling to put ligatures on the veins if I could possibly avoid it. The other orifice of the jugular, as it gave no trouble, was therefore left untied. In this stage of the operation, the transversalis humeri or supra-scapular artery, was necessarily divided and tied; after dividing part of the omo-hyoideus, I then pursued my dissection to the level of the axillary plexus of nerves. Having cut carefully on their anterior surface so as to feel pulsation distinctly, and detaching what I imagined to be the artery, I passed a ligature round it. I then carried the ends of the cord through a *serre ligature* so as to ascertain if, by compression of this body, I could stop the circulation or not. In doing this, one of the sides of the ligature was cut through in the eye of the instrument, which had not been properly rounded off, but at a considerable distance from the bottom of the wound. Having laid hold of the end again, and ascertained that one of the nerves, to which the pulsation had been communicated, was surrounded instead of the vessel, I retained the ligature for the purpose of holding the parts out of the way, till by a little cautious dissection I exposed the artery as it passes through the scaleni. Here, however, I had reason to believe the vessel unsound, partaking so far of the aneurismal dilatation, and determined on securing it nearer the heart. In this part of the operation, I received the greatest assistance from the spatulas recommended by Dr Colles of Dublin. I was indebted to an old pupil of his for a set of them, which he brought me before the operation. Those I used were made of sheet copper; they are so soft as to be bent easily to any shape, which they retain. With them my assistants, whilst their hands were out of the way, were enabled to hold aside the surrounding soft parts on all sides, so as to protect them from the knife; to prevent oozing from the small vessels; and, at the same time, give me a complete view of the bottom of the wound. These spatulas are of the greatest use in the ligature of all deep-seated vessels, the iliacs, &c. or in any deep dissection whatever. In fact, I consider them as the greatest addition made to our surgical instruments for many years. Having thus, then, gained a view of the vessel, and ascertained its condition, I proceeded cautiously to divide the scalenus anticus. Having cut through its whole thickness, to about its middle, in order to avoid the phrenic nerve, I contented myself with denuding the artery by separating those fibres next it, leaving the more superficial ones entire. In this way, as if by burrowing under the muscle, the artery was fully exposed for the passage of the

ligature. This part of the operation, which, by all who have attempted it, is considered the most difficult, and for which so many proposals have been made and instruments invented, was at once accomplished with the simple needle, which I had employed in many cases of aneurism, in different situations, previously. For a number of years I had practised this operation, as well as others, on the dead subject; and, from the repeated trials I had made, was satisfied that, even in great deepening of the wound from elevation of the clavicle, I should be enabled more readily to achieve my purpose with this instrument than with any other, of whatever fashion. The difficulty appeared to be, not in bringing up the point of the needle so as to catch the loop of the ligature, but in getting it beyond the vessel. This is readily accomplished with the instrument I used, and which is delineated in the accompanying plate. From its construction at the point, as soon as this can be seen or felt, the ligature is immediately laid hold of by the hook or forceps. Having passed the needle, armed with a strong round silk ligature, under the vessel with but little difficulty, I soon exposed the point, by rubbing the cellular substance betwixt it and my finger, and, with a small hook laying hold of the loop, withdrew the instrument. I then, by tightening the two ends of the cord, and pressing with my finger betwixt them, so as to command the pulsation, assured myself that the ligature was properly placed. From the very great depth and contracted nature of the wound, it was impossible to draw the knot with the fingers, and accordingly it became necessary to have recourse to some mechanical means. The purpose was fully answered by the very simple contrivance of my friend Mr Nasmyth, who obligingly assisted me at the operation. The instrument and mode of using it is shewn in the plate. We had previously tried it on the dead body, and ascertained its efficacy. The ligature was thus easily secured by a reef knot, with the effect of immediately arresting the pulsation in the tumour and wrist. The patient bore the operation with the greatest courage; with all the preparations, removal, and replacement in bed, it occupied about half an hour. The wound was brought together by three stitches, and covered with dry lint.

The constitutional derangement consequent to the operation was but slight. The pulse, in any part of the body, never was much above 100; nor did the action of the heart or large vessels seem at all disturbed. The patient was instantly relieved from pain, so as to sleep with but a very small dose of laudanum, (one-third of what he was in the habit of taking without ef-

fect,) and the heat of the arm was never at all lessened. The pulsation in the tumour returned on the day after the operation, shewing the great activity of the anastomosing vessels, but disappeared again entirely in two days. On the fourth day, I dressed the wound, and found it adhering completely; but a little matter oozed along the ligature, with some small clots of blood. Next morning, betwixt twelve and one o'clock, I was sent for on account of violent hæmorrhage. On my arrival, I found him a good deal exhausted, and surrounded with blood, apparently venous. On opening the wound, the stream was perceived to issue from the upper orifice of the external jugular, which had given way on some slight exertion, after the clots had been removed by the suppuration. A firm graduated compress was applied on the parts, and a little wine and water given him, which was continued to the extent of a few ounces every day, to bring about his strength again. No other unfavourable occurrence took place. The ligature separated on the twelfth day from the operation, which demonstrates satisfactorily that nothing but the vessel was included. At this period, a kind of thrilling could be felt in the radial artery, which has increased to pretty distinct pulsation. Three weeks from the operation, he begun to sit up a little in bed; a month after it he walked out; and to day (May 8th) the wound is completely cicatrized. The tumour is greatly diminished in size, and his health is rapidly improving. He walks out daily, entirely free from pain, and sleeps without an anodyne.

The detail of this case must, I doubt not, be interesting, as being the only successful one out of a considerable number operated on in Great Britain. The success met with will, I hope, encourage others to repeat it, and many patients may they thus save from an inevitable and dreadful death.

Explanation of the Plate.

Fig. I. exhibits the mode of tightening the knot of the ligature by means of the instrument.

Fig. II., which may be made of strong brass or iron wire.

Fig. III. represents the needle alluded to in the description of the case. It is made of soft and malleable iron, and may be put into any shape, though the slight curve here shewn is generally preferable. It will be observed, that the eye is small and close to the point, which is as sharp as it can be made without having a cutting edge. Both instruments are very considerably reduced in size.

Ed. Med. & Surg. Journal No 64. Page 382.

Instruments Referred to in Mr Liston's Case of Aneurism.

Fig. 1.

Fig. 2.

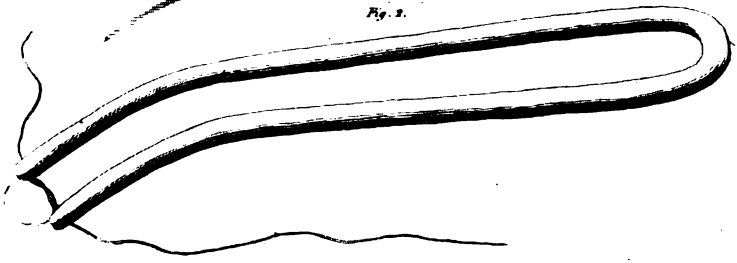
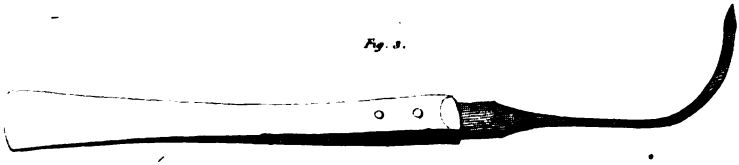


Fig. 3.



Engd by W.H. Lizars

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III.

Case of a Wound of the Throat, in which the Trachea and Œsophagus were divided across, and which did not terminate fatally, although the parts have not reunited. By JOHN GAIRDNER, M. D. Fellow of the Royal College of Surgeons, Edinburgh.

ON Thursday 23d of July 1818, H—— R——, prisoner in Edinburgh jail, was found, by the turnkey who opened his cell in the morning, weltering in his blood, which had poured out profusely from a wound in the anterior part of his neck. It appeared to have been inflicted by means of a razor, which was found near him. It was in a transverse direction, five inches in length, and had apparently been effected by several applications of the weapon; for three several impressions of it were distinctly traced upon the right side. The larynx was divided quite across at the upper part of the cricoid cartilage, and the cut extremities had receded from each other to the distance of at least three inches. The breathing was much affected by the position of his head, being easiest when it was a good deal inclined forward, and much impeded by all attempts to raise it or incline it backward. This was easily accounted for. The divided integuments formed a loose flap, behind which the inferior of the two divided extremities of the windpipe had retracted, and, accordingly, whenever he threw his head back, this valvular flap of skin was tightened. A considerable quantity of blood had got into the windpipe, which caused much coughing and impediment to his breathing, and was every now and then forced up in considerable quantities. To the great majority of the readers of this narrative, it will be unnecessary to add, that the carotid arteries and veins, and with them the great nerves that lie behind them, the par vagum, and the great sympathetic, must have escaped, which could not have happened had a wound of equal extent been inflicted a little lower down, where these important parts lie nearer to the windpipe. It is probable, too, that another circumstance contributed to their safety, viz. that, after cutting through the integuments, he had made use of the point of the razor, expecting that, by penetrating deeper, he would make the wound more effectual: the depth of the wound towards the spine appeared so great as to justify this conclusion.

There was much paleness of the countenance, and faintishness, together with a pulse about 50, somewhat intermittent and variable.

The patient was removed from his cell, and placed in a large room, with a free circulation of air and proper attendants. Attempts were made to bring the parts together, but they instantly produced a violent struggle for breath. He swallowed a little milk, which immediately passed out at the wound, and shewed that the gullet had also been laid open, and from the distance to which it had retracted, the medical gentlemen present were all of them satisfied that it had been entirely cut across.

The following day (24th) we attempted to pass an elastic gum tube into his gullet from the nose and from the mouth, but all our endeavours failed from the intolerable irritation and coughing which the presence of the instrument excited. We were, therefore, forced to abandon the attempt for the time, though with considerable reluctance, as it destroyed all expectations of getting the wound in the gullet, or any part of it, to unite by adhesion. He was this day much better. Pulse about 100; breathing freer; bowels open. The use of nutritious glysters was commenced this day, and continued three times a day for several days after. Each enema contained a proportion of tinct. opii, to prevent its being returned.

On the 25th, in order to prevent the larynx from retracting too much, and acquiring new adhesions in the retracted state, we approximated its cut extremities by means of two ligatures, one on each side, the under end of each of which was passed between the cricoid cartilage and the first ring of the trachea, and their upper ends through the soft parts immediately surrounding the thyroid; this operation excited a good deal of coughing and irritation, and it is remarkable, that the upper part of the larynx seemed to be exceedingly irritable, so that when it was touched internally cough was always excited, although the breath had ceased to be transmitted through it,* and notwithstanding that the recurrent nerves must have been divided. The retracted larynx being now brought back into nearly its original position, we discovered that there was another opening in the windpipe, between the cricoid cartilage and the beginning of the trachea, of the existence of which we

* This remark was made during the operation, and of course before the ends were approximated to each other.

were not before aware,* and through which the patient breathed freely. His pulse this day was 108.

On the 26th and 27th he was tolerably well. Pulse varied from 120 to 106. He had a little pain in his breast, which went off. He drank water occasionally, to wash his mouth and relieve his thirst. On inquiry he informed us, by writing, that very little of it, or none at all, went into his stomach, but that he thought a little air went through his nostrils occasionally. He complained much of thirst, but did not suffer from the sensation of hunger.

On the 28th we discovered that the two ligatures had separated from their superior attachments, and that the windpipe had retracted, though not so much as formerly. He was pretty well; pulse 106. He drank water freely and frequently, holding his head forward in a horizontal position to allow it to pass out at the wound without getting into the trachea. This practice had certainly been the main cause of the ulceration and separation of the ligatures, by the incessant action of the muscles of the throat which it produced; for, on inquiry, we found that he indulged to such an extent his desire for swallowing water in this strange manner, that he used several buckets-full in the course of the day. The enemata had hitherto been regularly received, and must have afforded him a good deal of nourishment, for they were always retained; but this evening he objected to the enema, alleging that it gave him pain. It therefore became extremely desirable to get some nourishment conveyed into his stomach; and the retraction of the trachea afforded a good opportunity for attempting this, by the introduction of a tube from the wound into the inferior of the two divided ends of the gullet. This was by no means an easy task, on account of the difficulty of distinguishing the different parts on the surface of the wound, buried as it was behind the flap of skin already mentioned. It was accomplished, however, the following morning by Mr Bryce, by means of a full-sized catheter of elastic gum, with a stilette of flexible metal. The stilette being withdrawn, a quantity of milk was poured into the stomach by means of a bladder. From this time forward, he had strong beef-tea poured into his stomach several times a-day, through a tube introduced into the wound, also a considerable quantity of milk. For some days he complained a good deal of thirst, but this was much abated by giving him a quantity of very weak spirits and water; and

* Another proof that the wound had been accomplished by at least more than one incision.

as he had been formerly accustomed to the free use of liquor, he was after this allowed daily about two ounces of common malt spirit, mixed with about five or six times the quantity of water.* His pulse soon became quite natural, his bowels kept pretty open, and the wound presented over its whole surface the appearance of healthy granulations. A question of considerable importance now occurred, whether or not it would be advisable to attempt the reunion of the gullet, preserving at the same time the means of nourishing him during the time of the cure, by means of a tube introduced into it through one of the nostrils; but as it was deemed extremely improbable, from the distance to which the divided ends had retracted from each other, that he should ever regain the power of swallowing, and as it seemed certain, that the part where the reunion took place must necessarily be very narrow, and that he must continue through life to receive his nourishment by a tube of small dimensions passed through one of his nostrils, and, moreover, as we possessed a facility of withdrawing and re-introducing the tube, which we could not expect to find after the reunion of the gullet, it was judged better to make no such attempt.

On Sunday, August 9th, he had a considerable degree of difficulty of breathing, accompanied with cough. He was bled twice, and took a dose of senna without much relief. On the following day, he had much dyspnœa and wheezing; and it was found that the trachea had retracted a good way into the wound, which was healing and contracting around it. The contraction of the integuments went on so rapidly, that by night he was in danger of suffocation, to prevent which Mr Gall was forced to introduce a piece of œsophagus tube of elastic gum into his windpipe. It was always found necessary afterwards to have some tube there, for a recurrence of the same obstruction and danger was the inevitable consequence of its omission, even for a few hours. To get free of this contracted state of the integuments, and for the more convenient introduction of the tube into the trachea, it was necessary to make an incision perpendicular to the direction of the wound, through the flap of skin which formed its lower lip. This was done by Mr Bryce (on the 10th) with the greatest caution, for fear of producing hæmorrhage from the thyroid gland.

From this time he continued to recover rapidly, and still receives both breath and nourishment through tubes introduced by the wound in his throat. For the former, a curved funnel-

* The quantity of spirits was afterwards very considerably increased.

shaped silver tube has been found the most convenient contrivance; and it is remarkable, that, from its first introduction, its presence has occasioned no irritation. The shape of this tube, it may be of importance to describe particularly. The extremity which projects from the wound is about five-eighths of an inch in diameter. It becomes narrower as it proceeds inward, and is then curved downward. After the curvature it again becomes straight, and the direction of the last portion of it is at right-angles with that of the first. The bore of the tube at its lower end is a little elliptical, the diameters being seven-sixteenths and three-eighths of an inch respectively, and the small diameter being from behind forward, the great from side to side. The tube is secured in its place by means of a ribbon, which passes round his neck, the ends of which are put through two broad silver eyes in the margin of the outer end of the tube, which projects just far enough to be above the level of the skin. This tube is taken out every time he receives nourishment, for the purpose of more easily introducing into the opening in the gullet (which lies immediately behind the opening in the windpipe) a tube of elastic gum. To the end of this tube, which is of great length,* and of the diameter of the largest catheter, a small tin funnel has been fitted in such a way, that it may be removed and replaced at pleasure. The tube of the funnel is bent in a horizontal direction for his greater convenience, and the broths, &c. pass into his stomach by means of the pressure of the column of fluid in the funnel. After his meal is over, the tube is removed, and the silver one introduced again into the trachea.

When he had recovered sufficiently to be able to appear in court, he was brought to trial on a capital indictment, acquitted, and liberated from the jail in November 1818. At that time he was somewhat feeble and thin from his long confinement. He was unable to feed himself, and was indebted to Mr Gall and Mr Sibbald for their skilful assistance at all his meals, and for changing his tubes in the manner already described. He has since, however, happily for himself, acquired the art of managing his tubes, and accomplishing his meals without assistance.

In the month of March last, he paid a visit to Edinburgh, (having been for some time previously in the country,) in order

* The length of this tube is a matter of convenience, and not of necessity; for the liquids which constitute his nourishment pass quite readily into the stomach, when the tube is introduced two inches within the gullet.

to have the opinion of his medical advisers as to the practicability of enabling him to swallow again by the mouth. Dr Thomson and Mr Turner were also called into consultation on this occasion. After the fullest consideration, it was determined not to try any means for effecting this, for reasons similar to those which had formerly induced us to give up thoughts of it, and which have been already stated. It is worthy of remark, that, notwithstanding the singular manner in which he received his food, he was at this time strong, and even fat, and of a good colour; that, in short, he had all the appearance of a person enjoying excellent health. He walked about with as much freedom as ever, the wound being concealed from observation by a handkerchief tied round the neck, loosely enough to admit of his breathing with freedom.

The following additional facts will render the case more interesting in a physiological point of view:

During each meal, and immediately after it, there is a very profuse discharge of saliva from the mouth, amounting to from five or six ounces to eight ounces, or even more, and generally most profuse when the food is very hot.

He still preserves the sense of smelling in a very considerable degree, probably from his possessing the power of producing a current of air through the nostrils, by the action of the muscles of the mouth and tongue.

He possesses also a power of articulating to a certain extent, —very limited, of course, and without the slightest degree of LARYNGEAL sound. This power also must be owing to his taking a little air into his mouth, by the muscles of which it is expelled in the attempt at pronunciation. For instance, if a question be put to him which may be answered by the monosyllable YES, his tongue, and teeth, and lips, perform that succession of actions, which, in the sound state of the parts, would be necessary for its distinct articulation, and the word, or rather the letter S with which it concludes, is heard as in a whisper.

No case can be better authenticated than this, as, being almost as remarkable in its legal as in its surgical peculiarities, it attracted very general attention.

That the case terminated favourably, I consider to be mainly owing to the unremitting and skilful assistance of Messrs Gall and Sibbald, who resided near to the place of his confinement, and were most assiduous in their attention to him at all hours The former, especially, saved him on three different occasions from immediate suffocation, produced, in two instances, by the contraction of the wound, and, in the third, by the slipping of part of his apparatus, and fed him four times a day during the

whole time of his confinement, and for some time after his dismission from the jail.

His medical attendants, besides these gentlemen, were Dr Farquharson, Mr Bryce, and the author of this brief account of the case, all of whom saw him from the first. Dr Monro favoured us with his advice very soon after that period, and frequently attended at our consultations. And Dr Thomson and Mr Turner, as has been already stated, were afterwards consulted.

Edinburgh, March 20, 1820.

IV.

On Blood-letting in Dropsies. By Robert Lewins, M. D. Physician, Haddington.

Dr Blackall, in the preface to his most excellent work on Dropsies, has remarked, that dropsy of the same cavity is not always the same disease. The value of this observation, as well as the truth of it, will be acknowledged by the practical physician. Every one in the habit of treating dropsies, must have been puzzled and perplexed to find very different effects produced by the same remedies, in diseases apparently the same; but when we know that effusion of water in the different cavities of the body is sometimes the effect of inflammatory action, or at least is combined with this state, and sometimes the result of relaxation and debility of the system, we can very readily conceive how the remedy, which at one time will do good, may at another be inert or even prejudicial.

General debility, and in consequence of this, laxity of the exhalants, has generally been considered the proximate cause of dropsy, and the practice of physicians accorded with this notion; phenomena, however, frequently presented themselves to accurate observers, which by no means corresponded with the received doctrine.

Dr Baillie noticed, in an anasarcous patient, the cells loaded with an effusion imperfectly coagulated and lymphy, and he has also seen the membranes covered with an inflammatory crust, even where there had been a true dropsy of the cavity. Similar appearances presented themselves to other medical practitioners; but still it does not appear that much practical application was made of this knowledge, at which we may be the more surprised, as the very practice which these appearances would

naturally have suggested, is as old as Hippocrates, although some writers of the present day seem to suppose that it was never thought of until the year 1818. Blood-letting was recommended as a powerful remedy in a dropsy by the father of physic. Celsus, when treating of hydrops, says, "Si febris quoque est, hæc in primis submovenda est per eas rationes, per quas huic succurri posse propositum est: si sine febre æger est, tum demum ad ea veniendum est, quæ ipsi morbi mederi solent." From this we are almost led to suppose, that venesection was one of the remedies he employed.

Paulus Æginetus practised blood-letting in dropsy. In the course of the sixteenth, seventeenth, and eighteenth centuries, the same practice was recommended by different practitioners, amongst whom we find Trallian, several physicians of Florence, Hoffman, Burserius, Lieutaud, Spon, Stock, Home, and Grapengiesser. Hoffman had recourse to blood-letting in every kind of dropsy except that of the belly; and he tells us, that he did so "multiplici edoctus experientia." In Vol. III. of his works he discusses the question "num venæ sectio in hydrope probabit," and answers the question in the affirmative.

Lieutaud was aware of the efficacy of blood-letting in dropsy; and expressly mentions, that, if the disease has arisen from suppressed discharges, if it occur in youth, or occasions difficulty in breathing, the cure may be begun by blood-letting. Dr Cullen has quoted * what Lieutaud has said concerning blood-letting in dropsy, to prove that the French physician wrote without method; it may be so, but it must be allowed, that a patient labouring under dropsy had a better chance of being cured by the practice of Lieutaud than by that of Cullen. The want of precision, of which Dr Cullen complains, in this instance at least, in all probability, arose from Lieutaud having but an imperfect knowledge of what he was writing about; he was convinced, by experience, that blood-letting afforded relief in dropsy; but he was not quite certain as to the particular cases in which it might be practised with advantage.

Spon states, that he had frequently seen dropsy cured by venesection, which had been aggravated by mercury and diuretics.

Dr Grapengiesser, I believe, has treated this subject more fully than any other writer; but I have never been so fortunate as to see his work.

In 1811, Dr Blackall published the best book we have on

* Preface to the First Lines.

dropsies, in which he has endeavoured to show under what circumstances it is proper to practise blood-letting in these diseases; and he has suggested the propriety of inquiring accurately into the state of the urine in dropsical patients.

The opinion which I entertained eight years ago of the efficacy of blood-letting in the scarlatinous dropsy, may be known by what I have said on the subject in my inaugural dissertation, which was written in 1812. "Valetudo adversa, occasio cujus est scarlatina, sæpe percellit atque negotium facit morbus postquam cessavit: sæpenumero in locum ejus hydrops dirus succedit, qui vitam ægri in discrimen adducit, et quod inexplicabile videtur, gradus effusionis serosæ morbi præeuntis violentiæ minime respondet. Ægrotantem novi huic valetudini adverse immolari, quæ originem a prægressa scarlatina traxerat, adeoque etiam miti, ut auxilium medicum nunquam necessarium videretur. Hic morbus subsequens idem ac hydrops vulgaris non est spectandus; aliquantulum actionis inflammatoriæ effusioni præiri observatur, quæ adhuc durat etiam quum haud paullulum laticis sese a sanguine secreverat. Hoc morbo, sicuti in morbis aliis qui vasorum actionem intendunt, sanguis mittitur fausto cum exitu, et si hirudines ad jugulum applicemus, eamque ad partem faucium inferiorum in qua tumor cernitur (quod multum periculi portendit) ægroto sæpe opem feremus, effusionemque impediemus."

Dr Abercrombie, in a late number of the Edinburgh Medical and Surgical Journal, has made some valuable observations on the efficacy of venesection in this kind of dropsy. The cases which I subjoin are additional proofs of the benefit to be derived from the practice he has adopted. In one of my cases, bloodletting was carried further than it has ever been before, under similar circumstances, with the most gratifying result. Indeed, I scarcely ever treated a disease where the effects of the remedies were more prompt and satisfactory, or where the relief was more evidently the immediate effect of what was done.

I was called on the evening of the 24th of December 1818 to the son of Mr D. a robust boy of five years of age. He had complained of headache, sore throat, and general derangement, a fortnight before this time; but the symptoms of disease appeared so slight, that no alarm was excited, nor did his parents think it necessary to seek medical assistance for fourteen days from the time he was taken ill. For twenty-four hours past he had been uncommonly restless, and complained of severe headache, pain over his whole body, and of thirst. Tongue dry, and of a deep red colour; pulse 112, respiration hurried; belly, by account, regular; urine scanty, and of a muddy appearance; legs and feet swelled, but felt tense, and did not pit much upon pressure.

Ordered some powders, composed of nitrate of potass and squills, to be taken at intervals during the night, with the intention of increasing the secretion of urine. On the following morning, I was surprised and mortified at the change which had taken place for the worse. His whole body was swelled, and his face in so great a degree that no one could have known him; pulse 130; respiration laborious; secretion of urine totally suppressed; V. S. ad ℥ viij. et habeat pulv. jalapæ c. gr. xxv.

In the afternoon he was somewhat relieved, and voided a little urine, which was like tar. Blood sizy. Prescribed mercury, digitalis, and squills, which he continued to take for some days without any good effect. Dec. 28.—Ceased to use the digitalis, &c. and ordered four leeches to be applied to his ankles, and a dose of jalap and calomel. 29th—P. 126; respiration still laborious; urine very scanty. Applied four more leeches. On the 30th, he was greatly relieved in every respect.

On the 2d of Jan. 1819, I was called to him about midnight, and found my patient in a state truly distressing. His breathing was more laborious than ever; he could not remain a moment in the horizontal posture; and he was tormented with a short dry cough; pulse 130; great increase of swelling over his whole body. V. S. ad ℥ x.

Jan. 3d.—Greatly relieved, and able to remain in a horizontal posture; pulse 118; cough much less troublesome; urine increasing in quantity, but still very unnatural in appearance; blood sizy, with a firm crassamentum, and a larger than usual proportion of serum; belly rather bound. Enema domestic, inject. quam primum.

Vespere. Continues to improve.

4th.—Has slept well during the night; respiration still easier; pulse 110; cough almost gone; urine continues to increase, but still dark-coloured; belly regular.

5th.—Continues to recover; pulse 110; cough gone.

6th, as yesterday.—From this time he gradually recovered; the urine increasing in quantity, and all the functions acquiring their former healthy state; but so great was the shock which he had received, by the violence of the disease, and by the measures which it was found necessary to have recourse to, that it was some months before he completely recovered his strength.

In the above case, we have a striking example of the good effects of blood-letting in the dropsy after an attack of scarlatina. There is no doubt but my patient had laboured under that disease, although the eruption was scarcely noticed, and had disappeared before I was called. His tongue had the particular appearance so characteristic of scarlatina; the disease was prevailing epidemically in the town at the time; and attacked the other children of the family. Little or no advantage was gained from the use of diuretics; the cure is to be attributed to the bleeding alone. Considerable advantage was, no doubt, derived

from the laxatives which were administered, both during the continuance of the disease, and during convalescence; but still the merit of having saved the patient's life is due to the lancet.

In this case there was a very striking resemblance to the fatal case which I allude to in my Thesis; the age of the children was nearly the same; both had laboured under scarlatina, so mild that medical assistance had not been required; and, in the subsequent malady, the symptoms were alike.

In the case that terminated fatally, the most active diuretics and purgatives were most perseveringly employed—mercury, digitalis, squills, calomel, compound powder of jalap, &c. &c. but without effect; the patient sunk under the violence of the disease. Upon dissection, a vast accumulation of water was found in every cavity of the body, and there were observed the most unequivocal signs of inflammatory action. This case made a lasting impression on my mind; and my practice in Mr D.'s son was influenced by a recollection of what had happened in the former. I have much reason to be satisfied that it was so; for, had I trusted to diuretics, I am convinced that I would have had an opportunity of proving by dissection that, in this case also, a highly inflammatory state had existed.

Case II.—T. M'N. æt. 4, laboured under scarlatina, in what was considered a very mild form, a fortnight ago. About three days since, he was observed to be anasarcous, and complained of headache; in the night, especially, he is restless, and groans in his sleep. His whole body is swelled; pulse 125; respiration laborious; belly bound; urine very scanty, and in appearance like dirty water. V. S. ad ℥viij. et habt. stat. submur. hydrarg. gr. iij.

May 13, 1819.—Much relieved; pulse 100; respiration easy; blood sizy; quantity of urine increased; vomited immediately after taking the calomel; belly only once moved since yesterday.

℞ Pulv. jalapæ gr. xv. mox sumend.

May 14th.—Continued to improve. Pulse 94. Urine increases.

15th.—Slept well last night. Pulse 90; respiration free; urine about natural in quantity, but still dark-coloured. Purgative operated well.

18th.—Continues convalescent.

20th.—Free from complaint, and urine natural both in quality and quantity. In this case I determined to attempt the cure without using diuretics, and succeeded. A single bleeding was sufficient to break the force of the disease, and, in the course of a few days, the boy was free from complaint. Blood-letting appeared to have a direct effect upon the kidneys; scarcely any urine was voided for twenty-six hours before I saw him, but in the course of a few hours after he was blooded, he began to void urine, and from that time it increased rapidly.

Case III. August 11, 1819. Mr B.'s son, æt. 6, after a mild attack of scarlatina, complained of violent pain in the right side of the neck, where a considerable swelling is observable. Pulse 116; respiration quick. Belly, by account, natural; urine rather scanty and dark-coloured.

Applicentur quatuor hirud. parti dolenti, et habt. calomelanos gr. iii. h. s.

12th.—Continues nearly as yesterday.

13th.—Still complains of pain in his neck. Pulse 116; urine still dark-coloured, but a little increased in quantity; belly regular.

Applicentur hirud. iterum.

14th.—To-day he is decidedly better. Pulse 108; urine increasing, but still dark-coloured.

15th.—Continues to improve in every respect. Urine natural in quantity.

17th.—Convalescent. Urine natural in colour and quantity.

21st.—Free from complaint.

In this case the symptoms were more mild than in either of the preceding; general bleeding was therefore not deemed necessary.

I fear we are not yet able to point out, with sufficient accuracy, the particular kinds of dropsy in which it is always necessary to have recourse to blood-letting. From my own experience, I would certainly say it is always so in the *scarlatinous*, that is, when the disease resists the ordinary mild remedies which Dr Cullen recommends. Dr Blackall, however, who is high authority on this subject, is of a different opinion. When speaking of scarlatinous dropsy, he says, "digitalis is the sovereign remedy. I know of no instance where it has failed when properly exhibited, and I add, without fear of contradiction, that it is almost equal to any emergency short of that destruction of parts which admit of no cure." He, however, qualifies this, perhaps too confident, assertion, by a confession of his favourite digitalis having failed in a case where it was given so as to retard the pulse, but the symptoms of disease seemed to be aggravated by its use.

In all cases of dropsy, it is the duty of the physician to ascertain if there be symptoms of inflammation in any internal organ, and, when that is the case, it must be subdued of course by venesection. When dropsy is unattended with unequivocal symptoms of inflammation, there may be a doubt about the propriety of using the lancet. From my own experience, and from what I have collected from others, I would say that blood-letting is proper in most, if not in all, dropsies that have suddenly appeared, whether from the application of cold to the

body, or from any other cause. In all cases where there is much difficulty in breathing, if the patient be young and robust, and certainly when the pulse is hard and cordy, the complexion florid, and the œdematous swellings do not pit much on pressure.

Dr Blackall has endeavoured to direct the attention of medical practitioners to the properties of the urine in dropsical patients. Our knowledge of this subject is not yet sufficiently matured to lead to any practical advantage, but the investigation suggested by Dr Blackall is certainly highly deserving the attention of the physician.

I regret that I did not try the effect of heat on the urine of Mr D.'s son. The boy M'N.'s did not coagulate by the application of heat, nor was there any precipitate by the addition of nitric acid. Upon evaporating an English pint, a small quantity of fetid saccharine matter was obtained. The same means produced the same result on the urine of Mr B.'s son.

North Berwick, August 30, 1819.

V.

Case of Parturition, rendered difficult by a Tumour within the Uterus, which was extirpated successfully. By Mr James Bell, Surgeon, Forres.

Mrs B———, aged 32 years, healthy, of small stature, but well formed, became in labour on the evening of Friday the 23d July last. On Saturday morning, an experienced midwife was sent for, and continued in attendance. On the afternoon of Wednesday the 28th, I was desired to visit her, and had the following account of the case from the midwife: That the pains had been irregular, sometimes pretty strong and frequent, at other times weak, and at long intervals;—that she had passed urine freely, but had no alvine evacuation;—that several attempts to throw up a glyster had been made without success;—that the os uteri was fully dilated, and that the membranes had, at an early period, given way. I found my patient's pulse good, that she had no headach, sickness, or any other complaint, except what arose from the labour pains. On examination, I found the os uteri dilated; the head of the child resting on the brim of the pelvis, could be touched with the fore-finger; but at the posterior part, over the rectum, I felt what I conceived to be the apex of a fleshy tumour, projecting a little without the

uterus, firm and unyielding, and interrupting free access to the child's head. Finding it impossible to alter the position of the tumour, and unable at this time to ascertain either its size, mode, or place of attachment, the labour pains also being trifling, and exerting no influence on the uterus or its contents, I determined to give an opiate, and wait its effects. It suspended the pains, and procured some sound and refreshing sleep. About five o'clock on Thursday morning the pains began with some force and regularity, and the tumour advanced a little. I now endeavoured to ascertain its size and origin, and found it filling all the back part of the uterus, (as far as I could reach,) and completely preventing the advance of the head. I tried again to push it up, but found it absolutely impracticable. Finding all my endeavours to push back the tumour, and to expedite the delivery in this way, ineffectual, I was at a loss how to act. Had I cut off the part of the tumour within my reach, even if it could have been done without risk of hemorrhage, (which, from its size, seemed likely to be profuse,) no advantage could have been gained, as the greatest part of the mass was still within the uterus. The child could not have been delivered by the feet, as it was impossible to pass a finger between the head and the tumour. The head was beyond the reach of the forceps, the application of which, even if it had been lower down, was impracticable. The lever was inadmissible. The operation of embryulcia also was, by the peculiar circumstances of the case, rendered both doubtful and dangerous. As there was no certainty of the child's death, nor as yet any other bad symptoms in the woman than those already mentioned, I determined to wait and trust a little longer to the assistance of nature. The pains, although weak, continued, with some advance of the tumour, till eleven o'clock A. M. of the 29th; they then ceased, and did not return for some hours. About two o'clock P. M. they again came on, and the tumour advanced. Hitherto there had been no flooding, now it came on in considerable quantity; the pains again ceased, and never returned. I now endeavoured to assist the expulsion of the tumour, by grasping that part of it within my reach, and gently pulling it from time to time. The hemorrhage ceased, and I at last succeeded in bringing the bulkiest part of the mass without the parts. I now found that it was attached by a neck; but this neck, instead of being slender, as I had hoped, was, to my great disappointment, so thick that I could scarcely grasp it. I also ascertained that the occiput lay towards the left, and the face towards the right sacroiliac synchondrosis. It still being impossible to deliver by turning, by the lever, or the forceps, and the woman having become extremely restless, and her pulse very quick, I determined to per-

forate the head. This, owing to my being unable to guard the perforator with my left hand, was exceedingly difficult. I at last succeeded, opened the head, took away in pieces the ossa parietalia and greatest part of the brain, introduced the crotchet, but could not draw down the head. I therefore resolved to wait some hours. She had some sleep. At three o'clock A. M. of Friday, I brought away the child with considerable difficulty. About half an hour afterwards, the placenta, which was attached to the fundus uteri on the left side, was removed. The flooding, at first considerable, soon became moderate. I tied two ligatures round the neck of the tumour, gave the woman an opiate, and left her. Next day, I cut off all that part of the tumour below the ligatures; very little blood followed; that same night the neck came away, in a state of putridity, (as I was told,) while passing urine. Of the after treatment of the patient, it is unnecessary to say much. Her bowels were opened by gentle laxatives. The fetor of the discharge was corrected, and every other attention, which the case appeared to require, was paid. Her recovery has been rapid and complete. The tumour, which was strictly steatomatous, was attached to the posterior part of the uterus, more than six inches from its mouth. Its bulky part was heart-shaped, and I am convinced it must have weighed fully six pounds.

This was Mrs B——'s first pregnancy, and during it nothing particular occurred. She enjoyed better health than is usual in such a situation. One thing only deserves notice. She supposed herself to have gone three months beyond the usual time; and this may probably be accounted for, by her dating from the formation of the tumour, and not from the conception of the child.

Forres, 28th August 1819.

VI.

Case of Ovarian Abscess successfully treated. By Thomas M'Keever, M. D. Assistant to the Lying-in Hospital, Dublin.

Anne Murray, æt. 40, of slender delicate habit; the mother of several healthy children, about two years ago observed a swelling to arise at the inferior part of the left inguinal region, accompanied with a feeling of weight in the lower part of the

abdomen, numbness, and impaired power of corresponding thigh. Previous to, and for a considerable time after she took notice of the swelling, the numbness of the lower extremity was at times so great as nearly to deprive the parts of all sensibility. These symptoms were attended with impaired appetite, suppressed menstruation, languor, and evident loss of flesh. Towards the approach of evening, she complained of chilliness and heat of skin. As her catamenia had been for some time suppressed, she was led to suppose that these symptoms were occasioned by a recurrence of pregnancy. Of this, however, she was inclined to entertain some doubts, in consequence of her courses returning shortly after their commencement. In this state of doubt and uncertainty, she applied to me for advice, in the month of August 1817. After a minute and careful inquiry into her case, I told her I was inclined to the belief that she was not pregnant; and that the tumour which gave her so much uneasiness was owing to some internal organic affection, but of what nature I could not say decidedly.

The circumstances which induced me to believe she was not pregnant were the following: In the first place, there was more lateral, and less anterior fulness than I have generally observed in pregnancy. Secondly, her breasts were quite soft and flabby. Indeed, these organs appeared to have undergone almost complete absorption. Moreover, the sickness of which she complained did not occur particularly in the morning, but was equally troublesome at all hours during the day; these, in conjunction with the regular condition of the menstrual discharge, influenced me in the opinion I had adopted. Aware, however, of the extreme uncertainty of all the usual symptoms of pregnancy, even at an advanced period, I was induced to request the assistance of my friend and preceptor, Dr Adrien of this city, who, after giving to the case a good deal of consideration, advised that she should be left entirely to nature until the complete expiration of nine calendar months from the period of her last matrimonial connection. She was, of course, enjoined to live *absque marito.*

From this period, the swelling went on progressively increasing, until at length she became enormously enlarged; so much so, that, when sitting, the most prominent part of the abdomen was on a line with her knees. She was altogether unable to move up or down stairs, or take any share whatever in her domestic duties; her respiration was much embarrassed, and she complained of distressing pain of back, loins, and ensiform cartilage; she is subject to occasional heartburn; her bowels, however, have continued uniformly regular; feel quite free from œdema, and she makes water with ease, and in usual quantity.

No appearance of catamenia for some months. Eleven months had now fully elapsed since the time I first saw her, during which period she had rigidly adhered to every direction then laid down. I accordingly proposed an examination *per vaginam* as the only decisive mode of putting the subject of her pregnancy completely at rest. The result of the examination fully confirmed the view that had been originally taken of her case, the uterus having been found not larger than an ordinary sized pear, and, as far as the touch could ascertain, of a completely healthy structure. As the poor creature expressed great desire that something should be done for her, I proposed to her the evacuation of the fluid by means of an incision in the anterior part of the abdomen, as the only chance of obtaining even temporary relief. To this, however, she strenuously objected, saying she would prefer slow and gradual death rather than submit to any thing in the way of operation. From this time she increased prodigiously; every day there was a perceptible augmentation in the size of the tumour, until at length she became so large as to be altogether unable to leave her bed.

In the month of October, she again sent for me, saying that she was now willing to submit to any thing I should propose for her relief. On entering her apartment, I do not think I ever looked on a more melancholy or distressing instance of human misery. She was supported in bed by means of bolsters and pillows, in a half reclined position. Her respiration was extremely hurried; lips purple; pulse small and indistinct; eye languid and heavy; forehead and chest covered with a cold clammy sweat. In a word, she appeared as if in a few moments she would breathe her last. In this very unpromising state of matters, I again proposed to her the evacuation of the fluid, as the only possible chance of prolonged existence; and to this she at length consented. Accordingly, having procured the assistance of my friend, Surgeon Corbet, we proceeded to the operation. A sheet, folded longitudinally, having been passed round her, for the purpose of gradual compression, an incision, about two inches in length, was now made in the anterior part of the abdomen, a short distance below the umbilicus. After cutting cautiously and slowly through the peritonæum, a dense fibrous membrane presented itself to the knife, the division of which was instantly followed by a profuse gush of purulent matter, mixed with shreds of coagulable lymph. A silver canula being now introduced, in about two hours * two gallons of healthy-looking

* The quantity was ascertained by precise measurement.

pus were discharged. As she complained a good deal of weakness, and became somewhat impatient at being kept so long in the one position, we thought it prudent, although there was evidently still a considerable quantity of fluid in the sac, to desist for the present. The edges of the wound were accordingly brought together by means of adhesive plaster, and a compress and bandage being placed over all, she was ordered an opiate, to be taken at bed-time. It was truly gratifying to observe the favourable change which had taken place, even in so short a time, in this poor woman's condition. Her pulse, instead of being thready and indistinct, was now regular and of good strength; her breathing became free and unembarrassed; and she felt, to use her own expression, as if she had got into a new state of existence.

Before the operation, she measured 50 inches in circumference. After operation, she measured 32 inches.

On visiting her the following day, I feared all my hopes of being able to prolong my patient's existence were at an end. She had incessant vomiting during the entire night; abdomen somewhat swollen, with general tenderness on pressure; pulse small and rapid. She was directed to take the common saline mixture, with small doses of the tinct. opii, whenever the vomiting was distressing. Small doses of the sulph. magnesiæ in mint-water were ordered to be given every third hour.

Abdomen to be stuped, and to have a turpentine enema administered this evening.

October 21st, vomiting has ceased; pulse 100, of better strength; countenance less anxious; tenderness of abdomen much relieved. As she had but very trifling passage from her bowels since the operation, the following bolus and draught were ordered:

℞ Submur. hydr.—Pulv. jal. āā gr. v; Extrac. gent. moll. q. suf. ut f. bolus quamprimum sumend.
Et post horas tres Haust. seq.
℞ Olei ricini.—Olei terebinth. āā ʒvi; Aquæ menth. pip. ℥i; Syrupi zingib. ʒii.

21st, Bowels have been well freed; pain of abdomen gone; pulse natural; expresses a desire for food. From this period, she gradually became convalescent; and, on the 6th day after the operation, she was able to be up, and walk about her room. Incision completely united.

November 1st, sleeps well; appetite good; strength much improved. Hectic symptoms have entirely disappeared.

In about three months, my patient called on me one morn-

ing, to say that an opening, about the size of a small pea, had made its appearance in the middle of the wound in the abdomen a few days ago; and that, on making the slightest exertion, matter flowed freely from it. Looking on this as an unusual effort of nature for her relief, I merely directed her to apply some simple dressing to the wound, and to continue her bandage.

In the course of a few weeks, this discharge ceased altogether, and she now enjoys a degree of health and strength to which she has been a stranger for many years. I may conclude by stating, that she has kept a regular account of her dimensions since the operation, and that there is not any increase of size whatever, nor is there the smallest tenderness or pain in any part of the abdomen.

Lying-in Hospital, Dublin, Aug. 24, 1819.

VII.

Contributions to Morbid Anatomy.

No. I.

By Thomas Sandwith, Surgeon, Beverley.

I.—Diseases of the Head.

1.—*Case of a Man of Letters who died of Apoplexy.*

W. G. was in the 82d year of his age when he had a fatal stroke of apoplexy. He had been a hard student, and was a pale sickly-looking man; but his complexion was originally sanguine. Four years before the seizure, which proved fatal, he had premonitory symptoms, and was saved by a free bleeding. After the attack he was insensible, and the right side was paralytic. His habits of life were extremely temperate; but ever since he had constant dyspepsia, sick headach, and frequent palpitations of the heart.

Dissection.—The scalp and membranes of the brain were bloodless. On paring down the cerebrum, the right side was beautifully white, and formed a contrast to the left, which was extremely vascular; and, owing to the rapid oozing of arterious blood, from innumerable points, of a bright vermillion colour.

The right ventricle was full of serum, the left of clotted blood, which had torn down the substance of the brain near the ven-

tricle. On removing it the morbid condition of the finer arteries was apparent. They were enlarged, and the several ramifications looked like streaks of black silk or worsted. The infundibulum and third ventricle were also full of blood.

The heart was firm, but larger than usual. All the other viscera were sound.

2.—Case of a Woman who died of Apoplexy.

A. H., a country woman, had a fit of apoplexy. She was naturally robust and sanguine, but for some months had an earthy unnatural complexion; was dispirited, and complained of sick-headach. Four years before this seizure she had a violent inflammatory fever, with pain in the epigastrium, which yielded to copious bleeding, and the antiphlogistic regimen. It was succeeded by symptoms allied to mania. Though free from fever she talked incessantly, and never slept, but wandered about all night. Her manner was forward and immodest, and the powers of her mind were wonderfully excited. She was prompt in her replies, positive in all her opinions, and on all subjects employed a copious eloquence. Her long sentences were stored with lofty images; and though she frequently pursued new trains of thought before she came to a period, it was curious to observe how happily she disposed of them, and returned to the point from which she had diverged to conclude the sentence. These symptoms yielded to free purging.

After the attack she was insensible, and the right side was motionless; but she frequently lifted the left hand to her head, and the leg of the same side was violently moved. The power of swallowing was gone, but the sphincters were closed.

Free bleeding from the external jugular had no effect, and she survived the attack only twenty-four hours.

Dissection.—The dura mater adhered firmly to the cranium. The finer membranes were manifestly inflamed. Between them there was an extensive effusion of bloody lymph, which reddened the surface of the cerebrum.

As was suspected, the greatest mischief was on the left side of the brain; the anterior half of which was completely injected with blood. A large coagulum, which had evidently proceeded from the rupture of innumerable diseased vessels, filled the left ventricle, and had broken down the thalamus nervi optici of that side, and the corpus striatum.

There was serum in all the other ventricles.

The cerebellum was surrounded by water; its surface was deeply inflamed, and in its substance there were many apoplectic cells.

The trunk was not examined.

Remarks.—Between inflammation of the brain and apoplexy, provided we include the whole disease, there seems to be no essential difference. The former seldom conforms itself to strict nosological description, but appears in various forms, and apoplexy is one of them. The symptoms which constitute pyrexia have ranked phrenitis with the phlegmasiæ; and if the premonitory symptoms of apoplexy be carefully noted, its exclusion is unaccountable. The occurrence of fever after the fit has been remarked by all observers, and the other symptoms are analogous. It is needless to observe how pointedly the two cases just narrated illustrate and confirm the opinion.

3.—Dissection of a Case of General Paralysis.

After the researches of Mr Hunter and Dr Fordyce, the inflammatory nature of palsy needs no illustration; but the following dissection is interesting in another point of view.

G. W., robust, fat, and plethoric, aged 65, had been an invalid many years. The prominent symptoms were frequent cough and dyspnœa, dejection of spirits, complete inactivity of mind, and weakness of the limbs; and some months before death the lower limbs were in a half paralysed state. In the last years of his life, his distresses were aggravated by dysury and discharges of blood from the urethra; and, a little before his death, he had complete suppression of urine. The disease of the brain seemed to have originated in indolence and chagrin from the sudden loss of fortune. It is very remarkable that he never complained of any painful sensations in the head.

Dissection.—The membranes of the brain were deeply inflamed, and the cerebrum and cerebellum were in a state of extreme congestion. Between the dura and pia mater there was a great effusion of serum, as also at the basis of the brain and in the spinal canal. The ventricles were full of water. Altogether four ounces of serum were obtained from the cavity of the cranium. The plexus choroides was distended and cellular.

The heart was remarkably small, soft, and of slender texture. The venous systems of the lungs and liver were engorged, but there was no extravasation of blood.

The veins at the neck of the bladder were overcharged, and the middle lobe of the prostate greatly enlarged.

There were evident marks of injury done to the urethra, by fruitless attempts to introduce the catheter. His medical attendant was unacquainted with the long catheter recommended by Mr Astley Cooper, one of the most important inventions of

modern surgery; his own were all too short to pass over the enlarged portion of the prostate, and, after fruitless attempts, this patient died without having obtained relief.

4.—*Case of an Idiot who Died of Phrenitis.*

G. W., æt. 40, a little deformed man, large headed and ideotic, died after an illness of six weeks duration. The first symptoms were pain in the epigastrium, and jaundice, with fever. The jaundice disappeared in a fortnight, and he began to complain of violent cramps in the muscles of the chest, and of vertigo. He hesitated in his speech, and, from loss of memory, when he began a sentence could not finish it. His tongue was dry and glossy, and, from a contraction of the forehead, his aspect was fierce. He still could eat as well as usual. Emaciation followed. The cuticle peeled off in large patches, so that he literally appeared as though covered with rags. Twenty-four hours before his death he was furiously delirious, and then comatose.

Dissection.—The skull was surprisingly thick.

The finer membranes of the brain exhibited marks of inflammation, and serum and coagulable lymph were effused between them.

The medulla of the brain was uncommonly hard, and bloody points were most abundant. The cerebellum had the same characters. The choroid plexus was gorged with blood.

The ventricles were full of serum, and a large quantity was deposited at the basis of the brain, and in the spinal canal.

The viscera of the trunk were sound.

II.—Diseases of the Chest.

1.—*Case of singular Enlargement of the Heart from Rheumatism.*

R. N., 45 years of age, and of the sanguine temperament, was naturally stout and athletic, but for many years had been lean, sallow, and decrepid. He had a stiff neck, and his spine was gibbous; changes in his personal appearance, which originated partly in habits of intemperance, and partly from repeated attacks of rheumatic fever. He had the first seizure of this disease 18 years ago. It was treated without evacuations, and was consequently tedious, and left a predisposition to the disease, one or two severe and protracted attacks of which he had every two or three years; and, after he was thirty, he had all the signs of a shattered constitution. He had likewise pleuritic symptoms, twice or thrice, within the last three years. When free from

these diseases, Mr N. enjoyed tolerable health, had a good appetite, was regular in his bowels, and breathed well. The only circumstance he remembered was a disposition to perspire profusely, and an intermission of the pulse had been observed several years.

Mr N. reached home on the 10th of June 1816. He had been one month in London; during which time, he was without appetite, had frequent fits of breathlessness upon any exertion, and nightly orthopnœa. Nausea and vomiting succeeded; he became feverish, and had continued thirst.

The present symptoms, in addition to the shattered appearance already mentioned, were an œdematous swelling of the feet and ancles, a variable complexion, sometimes sallow, sometimes flushed. The urine scanty, cloudy, and depositing a pink-coloured sediment. When at rest, his respiration was easy; but whenever he moved, and sometimes without any obvious cause, it was high, quick, and oppressed. The pulse was 100 in a minute, irregular and intermitting; and, during the fit of dyspnœa, always counting 120. He complained of oppression and flatulence of stomach, dozed during the day, passed tolerably quiet though sleepless nights, was thirsty, and had but little appetite for food.

The case appeared to be hydrothorax, with a rheumatic enlargement of the heart.

Squill, in combination with pil. hydrargyri, produced no diuretic effect; and, as it caused excessive nausea, it was soon discontinued. The tranquillity of the stomach was restored, but the disorder of the chest increased; and, towards the close of June, the nights became restless. If my patient slept, he had a frightful dream, and a frequent sense of suffocation compelled him to quit the horizontal posture. The digitalis was next used, along with the tincture of squill and the ætherial spirit of nitre, with considerable effect; but it ceased to act, and, at the end of July, the swelling rose above the calves, and all the other symptoms were aggravated. In August, the water had reached the foreskin of the penis, and medicines had no effect. Colchicum, broom, and pyrola, were tried; but they were quite inert. Ascites now appeared, and increased the whole of the following month; and, it is worthy of remark, the symptoms of hydrothorax were proportionably relieved.

His physician had recourse to cantharides and nitric acid; but, by producing over-excitement, they certainly did harm. In October, the legs were scarified, and gentle purges recommended. At first, these measures gave relief; but the most alarming debility ensued, and, early in December, he was apparently in

articulo mortis. The hands were blue and œdematous; there was no pulse at the wrist; the countenance was shrunk, and covered with a cold sweat. He gasped for breath, had protruded eyes, and a mortal inquietude. Ether, brandy, and ammonia, in large, alternate, and quickly successive doses, gradually restored the powers of life. The quantities of stimuli were, of course, diminished, and the intervals of exhibition lengthened, as strength returned; and it is worthy of remark, our patient voided twice the quantity of urine he had ever made at any period of his disease. Indeed, it was delightful to see him awake, as it were, from the slumber of death, to a state of health compatible with the ruined condition of his vital organs. Life was prolonged three weeks longer by cordials, of which the chief was Cayenne pepper. At length they ceased to act. On the 22d of the month, a severe pain in the head warned us of effusion on the brain; his sensations were afterwards benumbed; one eye was distorted; and the following day he died.

Dissection.—The emaciation of the carcase was extreme. There had been some gangrene about the sacrum from pressure. Petechiæ were visible here and there. As might be expected, the absorbents of the thighs were greatly enlarged.

We found fluid in all the cavities; blood and lymph between the membranes of the brain, and a little water, but no distention of the ventricles. In the cavity of the thorax and pericardium was much serum, and the abdomen contained a great deal of yellow water.

With the exception of the membranes of the brain, all the serous membranes exhibited marks of inflammation. The right lung adhered by an immense deposit of coagulable lymph to the pleura costalis. The concave surface of the liver was adherent to the stomach; the omentum, or rather its shrivelled remains, to the peritonæum; and the exterior tunic of the small intestines was universally inflamed.

With the exception of the stomach, the interior of which was covered with an erythematous redness, the mucous membranes were not diseased.

The brain was certainly without inflammation, but was firm in its texture. The same may be observed of the cerebellum.

There was great passive enlargement of the heart; it was pale, flabby, and of a rotten texture. The natural condition of the ventricles was reversed; the cavity of the left was larger than that of the right, and the walls of the right were considerably thicker than those of the left. The corpora sesamoidea of the aortic valves were ossified; the coronary arteries were sound.

The lungs were amazingly congested, and rendered almost solid by extravasation in the cellular texture.

About the liver there was some question. It was not enlarged, but the speckled appearance of its interior led me to suspect disease.

The cartilages of the ribs were ossified.

Remarks.—The connection between acute rheumatism and enlargement of the heart was, I believe, first observed by David Dundas, Esq. and his observations are published in the Medico-Chirurgical Transactions. * The case just narrated is another illustration, and is chiefly interesting from the reversed condition of the ventricles; the left being thin and flabby, and the right thick and muscular. This condition of the heart explains very satisfactorily the state of Mr N.'s system for many years;—pulmonary congestion, and a deficient supply of blood to the rest of the body; and was, of course, coexistent with the irregular and intermittent pulse which had been observed many years. It was painful to witness in this case the ravages effected in the muscular system by rheumatism. The great curvature of the spine denoted its fearful extent.

That dropsy is an inflammation of the serous membranes, is a doctrine which has been long established by anatomical observation, and is now very generally admitted.

Dr Baillie has remarked, "that water is found in the chest, where there are considerable adhesions. This shews that a good deal of inflammation had formerly taken place, which had probably, by throwing out a considerable quantity of serum, laid the foundation of the hydrothorax." † In this case the inflammation had manifestly extended to all the serous membranes.

2.—*Case of Luxation of the Ribs, from Enlargement of the Heart in Tubercular Phthisis.*

T. W. was in the inflammatory stage of tubercular phthisis when he consulted me, in May 1817. He was in the 20th year of his age, tall and delicate. His chest was narrow, his shoulders alated, and he had the external signs of scrofula in its most exquisite form. Traces of its ravages remained in his neck. The last six months he had been out of health, languid, bilious, and he had been subject to severe headache. He had also frequent palpitations of the heart, very distinct. He could

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* Vide Med.-Chirurg. Trans. Vol. I. p. 37.

† Vide Baillie's Morbid Anatomy, p. 60.

hear the heart beat against the ribs, and was sensible of a frequent intermission of its pulsations. There was a corresponding intermission of the pulse at the wrist. During the preceding months he had frequent attacks of pulmonary inflammation, and noticed one morning a protrusion of the ribs in the cardiac region. They were separated from the sternum, and projected considerably. After this event his heart beat with more regularity, and he had less headach. The first week of my attendance he had two attacks of hæmoptysis, and felt pain in the right side, a little below the clavicle. Flushing of the cheeks and burning palms followed, and a regular hectic, with cough, and puriform expectoration, was established. The lancet was freely used, the cough was relieved, but it never entirely left him; the violent action of the heart ceased, and the ribs returned to their natural situation; but hectic fever continued, and his emaciation increased, until he died, which event took place in the middle of December. Much relief was obtained in the last stage from etherial vapours; and when his mouth became aphthous, he subsisted almost entirely on rose and distilled water.

Dissection.—The third, fourth, fifth, and sixth ribs were found separated from the sternum, and a little elevated.

The heart was very small, contrary to expectation. It was empty of blood, and the right auricle and ventricle were thin and flaccid. The foramen ovale was not entirely closed. There were traces of inflammation of the aorta.

The superior lobe of the right lung adhered to the chest, and formed a large bag, containing pus. Except the left inferior lobe, which was tolerably sound, the remainder of the lungs was a solid mass of tubercle. There was serum in both sides of the chest.

All the mesenteric glands were enlarged.

In this case there was evidently passive aneurism of the right chamber of the heart, from pulmonary infarction, which free depletion had relieved. The patient died of genuine pulmonary consumption.

3.—*Case of Angina Pectoris.*

Mr J., formerly a butcher, æt. 62, of a robust habit, and sanguine temperament, has some time had symptoms of angina pectoris. He is looking extremely pale. When he walks, a violent pain in the middle of the sternum crosses the breast, and runs down each arm. The shoulders feel as though loosened from their sockets, and he is compelled to stop instantly.

A vomiting sometimes succeeds. The complaint frequently comes on in the night time.

When he sits still, he feels no disorder.

The pulse is above 100, soft, and intermits every fifth or sixth pulsation.

He was bled three times, and the blood was sizy.

He died suddenly, while in the act of giving some direction to his servant rather hastily.

Dissection.—The pericardium and heart were thickly covered with fat.

Both the coronary arteries were ossified, and in some places become mere capillary tubes. The morbid process extended to the smallest ramifications.

The heart itself was pale and flabby, and soft, like boiled beef.

The mitral valves were altered by disease, as were the semilunar valves of the aorta. The aorta itself exhibited marks of inflammation.

There were no adhesions in the chest, and the lungs were sound.

In his excellent work on Nosology, Mr Mason Good describes two species of angina pectoris, which he calls "Sternalgia Ambulantium," and "Sternalgia Chronica." The symptoms of the first species correspond with those of the case just related. From the cases that have occurred to him, he concludes, "that the respiratory organs are the seat of Spec. 1, and some affection of the heart of Spec. 2." * The dissection of Mr J. contradicts this opinion.

III.—Diseases of the Abdomen.

1.—*Case of Obliteration of the Cystic Duct, and Ulceration and Adhesion of the Duodenum, terminating in Inflammation, from Gallstones.*

I was invited by my friend Mr Jackson, to be present at the dissection of W. K. a weaver, a short robust man, 45 years of age. He had been an invalid the last fourteen years of his life, and had consulted several medical men, myself among the number. All agreed that his complaint originated in gallstones.

His skin had always a slight bilious tinge, and he had every now and then paroxysms of acute pain in the epigastrium, extending a little to the right side. The pain produced cold

* Vide Good's Nosology, p. 113.

sweats, but no acceleration of pulse. His stools, on these occasions, were white or clayey, his urine bilious, and he was sometimes jaundiced. Opium alone seemed to mitigate the pain. He voided several large gallstones by stool.

Before the seizure which terminated in death, he had complained several days of slight feelings of pain in the stomach, but was on that day better, and more than usually cheerful. Towards evening, however, while at a neighbour's house, the pain seized him, and was most excruciating; large drops of sweat ran down his face. He was heard to say, this attack differed from any he had ever experienced, and that he should not recover. Medical assistance was procured. The next morning, the pain was found to have diffused itself over the whole abdomen, which was so tender, that the weight of a blister was intolerable. Fever now manifested itself: the skin hot and dry; the tongue white, with a brown streak in the middle; the urine red; and the pulse 132 in a minute. As he lay bolstered up in bed, he presented a pitiable spectacle. He breathed short and quick, and his countenance was the image of distress. His chief anxiety was to keep the trunk immoveable. He was costive, and vomited frequently. The next day, signs of collapse appeared; and, early the following morning, he expired.

Dissection.—The peritonæum, omentum, and external tunic of the small intestines, were intensely inflamed, and serum and coagulable lymph were deposited in the cavity of the abdomen.

The mucous membrane of the stomach was erythematous.

The duodenum adhered to the concave surface of the liver. Separating this adhesion, two circular apertures, the remains of two ulcers, now healed, appeared. The larger of the two was about half an inch in diameter.

The cystic duct was diseased, and almost obliterated. Air could be forced by the blow-pipe, but the bile could not pass. The bile was black, and of the consistence of an extract.

The spleen was pale and shrivelled.

2.—*Case of Scirrhous Pancreas.*

In his valuable work on Diseases of the Abdominal Viscera, Dr Pemberton says, in scirrhous pancreas "there is deep-seated pain in the region of the stomach, and more or less of sickness, with emaciation." On this last symptom he observes, "the body is often reduced to the utmost state of emaciation, and the integuments of the abdomen appear almost to rest upon the spine." To the general accuracy of this description, the following case will bear testimony. The pain was not subduing as in spasm, but gave rise to the most frantic expressions and gesti-

culations; and the sickness, when once established, was constant. Nothing remained on the stomach. This symptom probably did not occur until the mucous membrane of the stomach became erythematous.

Mrs C. an unmarried lady, 67 years of age, of a dark complexion, complained of continual pain in the epigastric region, which extended to the left hypochondrium. Deep pressure increased the pain; and there was a remarkable pulsation below the cartilages of the false ribs, on the left side. She was a good deal emaciated, but without fever; the bowels generally costive. Her appetite was bad; but she had no sickness or vomiting. Her complexion was sallow; and her eyes had a peculiar expression of anxiety. The pain sometimes was most intense, and on these occasions she exhibited signs of distraction. Her body was agitated in a most extraordinary manner; she tore the bedclothes, and said she could tear the flesh from her bones. Large doses of laudanum afforded some relief. Six weeks before death, a vomiting came on. Every thing she swallowed was rejected, and sometimes a little bile and mucus. Nothing appeared to relieve this distressing symptom; and, after six weeks of extreme misery, she died.

Dissection.—The cadaver was extremely emaciated. The spine could be distinctly traced through the parietes of the belly.

The stomach was erythematous.

The pancreas had the usual marks of scirrhus; and the splenic artery was imbedded in scirrhous matter.

A small tubercle was found in the parietes of the uterus, and the germ of a polypus in its cavity. All the other viscera were sound.

3.—Case of Fungus Hæmatodes of the Kidney.

I dissected E. W. an old woman, in the presence of Dr Hall, Mr Chalmers, and my brother. There was an immense tumour, extending from under the ribs of the right side to the pelvis, and occupying two thirds of the cavity of the abdomen. The disease of which she died was supposed to be an enlargement of the liver.

The cellular texture on the surface of the belly was loaded with fat, but the rest of the body was in a state of great emaciation. The tumour, when exposed, was an enormous unshapely mass, to which the small intestines were adherent. Having separated it from these adhesions, we found it also adhered to the concave surface of the liver; and, on further examination, it proved to be the right kidney. It weighed eight pounds. The

exterior investment exhibited marks of inflammation; and underneath it were several collections of pus. Cutting it in two, the interior resembled diseased brain. Urine flowed from it, and here and there were extravasated blood, and portions of coagulable lymph, like polypi or worms.

The coats of the bladder were thickened, and exhibited the same morbid appearance.

The other kidney weighed only four ounces, and contained a small calculus.

There were marks of inflammation on the peritoneal surface of the small intestines in various places.

History of the Case.—This patient had nephritic complaints twenty years, and frequent discharges of bloody urine. She was attended by my friend Dr Hall three years ago; and in addition to the discharge of blood, had great pain and difficulty of making water;—fever and constant pain in the loins. The last attack he witnessed was unusually severe. The dysury was attended with the most excruciating pain in the region of the bladder; and she eventually voided a substance, which she supposed to be a worm, but which was probably a portion of coagulable lymph, such as we found in the kidney. This would plug up the meatus urinarius; and the morbid state of the bladder accounts for the pain she felt in the efforts of micturition. A month before she died, she became my patient for the first time, and had, besides the tumours, which were painful, the usual signs of fever. Bleeding relieved the pain. The subsequent treatment was entirely palliative. Emaciation and debility increased rapidly, and she died.

This disease is well described by Bichat. *

"L'induration des reins n'est pas toujours une suite de leur inflammation: elle vient aussi par un engorgement chronique, qui peut être de différentes espèces. Ces viscères augmentent de grosseur, et acquièrent quelquefois un volume énorme; on les a vus remplir presque toute la capacité du bas-ventre. Ils sont tantôt mous, et contiennent un assemblage de petites hydatides, des poches pleines d'urine, de pus, de matière stéatomateuse, &c. d'autres fois, ils sont durs et squirrheux. Dans ces derniers cas, la suppression d'urine n'arrive que par degrés; et même quand il n'y a qu'un rein d'affecte, on n'appercoit souvent aucune diminution dans la sécrétion, et la maladie existe sans être annoncée par aucun signe: il n'y a ni fièvre, ni douleur,

* Vide Œuvres Chirurgicales de P. J. Dessault, par Xav. Bichat, Tom. III. p. 38.

ni chaleur dans la région des reins; quelquefois les malades éprouvent seulement de la gêne, et se plaignent d'un sentiment de pesanteur dans cette partie, lorsque l'engorgement est considerable, et la tumeur volumineuse, les filets antérieurs des nerfs des premières paires lombaires en sont comprimés; l'engourdissement à l'aine et à la partie antérieure de la cuisse du même côté, augmente quelquefois, au point d'empêcher les malades de marcher."

Beverley, July 16, 1819.

VIII.

Cases of Ileus from a Twist on the Colon. By WALTER OUDNEY, M.D. M.W.S. &c. Edinburgh.

— M. aged 20 months, March 10th 1820, in the evening became hot, restless, and exceedingly thirsty. He screamed often, started much, and had most urgent vomiting. It is said that he had two natural alvine evacuations during the night. His surface next day became cold, his countenance collapsed, and in the afternoon he expired without a struggle. Previous to the attack his bowels were regular, and he seemed to enjoy good health.

These particulars of the history I collected from the friends, who, unconscious of danger, had not called in medical assistance.

Appearances on Dissection.—The cellular membrane was loaded with fat. Much bloody serum was found in the cavity of the abdomen. The omentum, which was collected into irregular folds, was considerably more vascular than usual, and chiefly occupied the left hypochondriac region. The jejunum and ileum were of a very dark dull red colour, approaching to purple, which was most intense in the jejunum, but ceased abruptly at the termination of the duodenum. These intestines contained a viscid bloody fluid, but were not more distended than common. On examining each coat separately, the peritoneal exhibited its natural transparency, and scarcely any vessels carrying red blood could be observed ramifying upon it: the muscular was also perfectly natural; but the mucous or villous coat was completely covered with vessels, loaded with dark-coloured blood, and many minute points and patches of extravasated

blood, and numerous small fungoid excrescences were seen here and there scattered upon its surface; it was much thicker than usual, but appeared to possess its natural firmness of texture.

The mesenteric glands were slightly swelled, but highly vascular.

The colon, from the caput cæcum to about the middle of the transverse arch, was greatly distended, and of a deep red colour, although much less so than the small intestines. The distention occasioned a considerable alteration in the relative position of the parts. The caput cæcum was turned over a little toward the upper part of the hypogastric region, and the ileum, instead of entering its left side, appeared to enter from behind; hence the pressure of the cæcum on the ileum would tend in a slight degree to obstruct its passage. The ascending colon occupied a considerable part of the umbilical region on the right side, and thus forced the small intestines more to the left side than they commonly are.

At about the middle of the transverse arch and termination of the distention, the colon was found twisted from above downwards, but without strangulation; the obstruction, however, induced by the twist, was so complete as entirely to prevent the passage of fluids. The marks of inflammation at this part were not greater than in the portion above. Immediately below the obstruction the intestine was perfectly healthy, of its natural pearly colour, and strongly contracted. The sigmoid flexure was much longer than usual, passing over to the right iliac region, and making an additional turn previous to its termination in the rectum.

With the exception of two or three drachms of serum in the ventricles of the brain, the other viscera were perfectly natural.

My intelligent friend, Dr Stroud, who assisted me in the above dissection, favoured me with a case nearly similar, which I communicate, with the permission of Dr Duncan, junior, under whose care the patient was in the Royal Infirmary.

M—— H——, aged 40, servant, 21st May 1819, is affected with excruciating pains of the bowels and lower part of the back, returning at intervals never longer than two minutes; unattended with local heat; aggravated by extension of the body, but not by pressure; and relieved by relaxation of the abdominal muscles, as in bending forwards on the knees. The pains are accompanied with great restlessness, and continual change of posture; some nausea, eructation, and hiccup; and frequent but unavailing efforts to evacuate the bowels, which are obstinately constipated, and the belly much distended, firm, and elastic.

She labours also under hæmorrhois, attended with considerable pain and tumour. Pulse 62, small and weak, when sitting; feels chilly, and has no dyspnœa; tongue moist, and slightly brown in the middle, with much thirst; urine passed in small quantities, but without difficulty. The patient has long been subject to constipation, and for the last year and a half to piles; and has formerly had attacks like the present, but never so continued and severe. She has had hæmorrhois eight days, and passed the last nine without a motion, having previously also been very costive, and taken irritating food. She was attacked with pain in the right iliac region yesterday morning, which afterwards extended to the back and bowels, and has since gradually increased. In the evening, she vomited a viscid matter, which was dark, but not offensive.

She was bled last night to a small extent, got salts, two injections, and a liniment externally, without evacuation or relief. An enema purgans, administered soon after her admission, was speedily returned without effect.

During the five days that the patient continued alive in the hospital, not the slightest alvine evacuation took place, although within this period she got one drachm of calomel, two drachms of the compound colocynth pill, nearly an ounce of the compound powder of jalap, six ounces of castor oil, two ounces of the oil of turpentine, and numerous purgative, emollient, and tobacco enemas. On account of increased tenderness of abdomen on the 22d, 16 ounces of blood were drawn from the arm, with little apparent effect. A candle, at least ten inches long, introduced on the evening of the 23d, ascertained that the rectum was free from obstruction; and, on making trial the following morning, about three pounds only of fluid could be injected per anum, which were soon returned with great force.

The symptoms were chiefly those of restlessness, watchfulness, and anxiety, with frequent change of posture, excited by the pain of bowels, terminating at length in languor and exhaustion.

The abdominal pain, besides affecting the back and sides, extended to the left shoulder. It was aggravated both by the warm bath and by cold water dashed on the loins, but was somewhat relieved by the tobacco enema. The efforts to evacuate were frequently repeated; but, except on one occasion, after taking a dose of castor oil, she was never sensible of any tendency to relaxation.

The pulse throughout was small and weak, progressively increasing in frequency from 62 to 120, and she was disposed to chilliness. The respiration was never embarrassed, and the

urine, although not copious, was passed without difficulty. The tongue was rather white and dry, with much thirst, but no nausea or bad taste. Vomiting occurred only from the use of a saline cathartic, which was in consequence discontinued.

The patient gradually declined, and died on the 25th, without groan or struggle, her pulse having, on the previous day, become imperceptible at the wrist, and her respiration, though without distress, increased to 42.

Appearances on Dissection.—On opening the belly, which was very prominent, more than a pound of dark-coloured bloody serum was found in the peritoneal cavity. The abdomen was almost wholly occupied in front by three enormously dilated portions of the colon, lying nearly vertical, and parallel to each other; the coats of which, being thin, readily discovered the colour of their contents.

The portion on the right, consisting of part of the transverse arch displaced, was of a light salmon colour; a considerable quantity of vascular fat was attached to its inner margin, and hung below it, which might possibly be the remains of the omentum, not elsewhere conspicuous. The middle portion, which was the largest of the three, consisting of a part of the sigmoid flexure, lay in a waving direction, exhibiting a marbled surface of a deep grass or bottle-green colour, with one of the longitudinal bands, extremely expanded, running along its middle. The portion on the left, consisting of a higher part of the sigmoid flexure, was less prominent, and of a lighter green colour than the former. Behind it lay the remainder of the descending colon, hanging perpendicularly, and likewise much distended. Around and beneath the above were a few convolutions of the small intestines, which were generally redder than natural; and between the several parts above described, more especially between the middle and left portions of the dilated colon, there were various recent adhesions.

At the termination of the colon in the rectum, a remarkable mechanical obstruction was formed by a twist of the sigmoid flexure from left to right, which, when thus exposed, could be readily disengaged and renewed by the hand, effectually preventing the passage of fluids, but without strangulation, as the intestine at the strictured part, although somewhat suffused, was otherwise sound.

The stomach and rectum were empty. The intestines contained a large quantity of thin æruginous feces, but no solid matter. The distention was entirely confined to the colon, between the valve and the obstruction, and in its upper portion it was chiefly occasioned by flatus.

The gall-bladder, which was filled with a reddish-coloured liquid, without concretions, adhered closely and extensively to the colon, tinging its neighbouring surface of a deep yellow.

With the exception of the liver being rather small and pale, and some old adhesions between the lungs and sides, no other morbid appearances were observed.

I have only met with one similar case on record, and that is related by Dr Abercrombie in this Journal. Between it and the case of M—— H—— a striking resemblance may be observed: in both, the previous history, the progress of the disease, and the seat of the obstruction, were nearly the same. The progress of the disease in the child was much more rapid, and the marks of inflammation greater than in either of the other patients. In all the cases the inflammation was not more severe at the seat of obstruction than higher up. In the child, it was observed, that the degree of inflammation was in proportion to the natural vascularity of the mucous coat; hence it was greatest in the jejunum, and slightest in the colon, and that it was also almost entirely confined to this texture; but in the other patients it appears to have affected the other coats also; for in M—— H—— various recent adhesions were found between the dilated portions of intestine; and in Dr Abercrombie's patient several gangrenous spots were seen.

Sudden movements of the body, and violent contractions of the abdominal muscles and diaphragm, when the colon is in a particular state, appear to me the most probable causes of this species of obstruction. When one portion of the colon is much distended with flatus or feces, and the portion next to it is strongly contracted, (an occurrence not at all uncommon,) any sudden movement of the body may cause the distended portion to turn a little over upon itself, and give rise to the first degree of twist, which will soon become complete, in consequence of the distention from above increasing.

It would be highly satisfactory were we capable of detecting this affection early, as much unnecessary suffering to the patient might be prevented; for it must be evident, that cathartics, the remedies commonly used, instead of relieving, will increase all the symptoms, and hasten greatly the fatal event. As yet, however, I know no symptoms peculiar to this species of ileus.

The injection of air into the rectum has lately, I understand, been suggested as a means capable of removing a twist upon the colon. I think it will prove successful, and would recommend it to be tried in all obstinate cases of ileus. With regard to its use, it may here be remarked, that the portion of intestine below the obstruction must be strongly distended; for it is necessary

that the distention below be equal to that above the twist, otherwise the desired effect cannot be accomplished. For this purpose, the common resuscitating bellows will be found to answer best.

Although no instances of a twist upon the small intestines have, so far as I know, been observed, yet I nevertheless suspect it to be no uncommon cause of ileus. Many of the cases, which are supposed to proceed from deficiency of contractile power in the muscular fibres of a portion of the small intestine, arise very probably from this cause. It may be urged, as a powerful objection, that no notice has been taken of it in the numerous dissections of patients that have died of ileus on record. The force of the objection, however, may be greatly done away, when we consider the facility with which a twist can be disengaged, and the parts restored to their natural state. The common method of tracing the small intestines from the stomach downwards, or from the colon upwards, would be sufficient for this; so that we need not be astonished at such a state of parts passing unnoticed even where it had existed.

Edinburgh, May 6, 1820.

IX.

Description of an Instrument which has been employed successfully in reducing Luxations of the Humerus. By Mr John Elderton, House Surgeon, General Infirmary, Northampton. *(With an Engraving.)*

The difficulty of reducing the luxated humerus is often so great, not merely in cases of long standing, but in recent ones, that an apparatus, calculated to accomplish the purpose with greater certainty and effect, appears to me likely to meet with a favourable reception from the practical part of the profession. Before, however, proceeding to describe it, it will not be irrelevant to take a brief anatomical view of the obstacles to reduction, which this apparatus proposes to surmount.

I have ever considered the difficulty of replacing the head of the dislocated bone to arise from two circumstances: first, the method employed does not efficiently confine the scapula; and, secondly, no apparatus has been regularly adopted to elevate

the head of the humerus, after that bone has been sufficiently extended from the scapula.

Before going farther, it will be proper to advert to the causes of failure in the modes of reduction which I have been in the habit of seeing employed. The Ambe, with all its improvements, appears liable to insurmountable objections: viz. it does not horizontally retain the scapula; and, moreover, the point of action of the lever forcibly compresses those muscles in the axilla which should be left free to elongate, and thus to allow of the requisite separation between the scapula and the head of the humerus. This I will farther explain. When the head of the humerus is displaced from the glenoid cavity downwards, (which is the ordinary species of luxation,) it is immediately and powerfully confined down by the united action of the pectoralis major and latissimus dorsi muscles, aided by that of the subscapularis and teres major. I am also disposed to believe, that the deltoid, with the triceps extensor cubiti, biceps flexor cubiti, and coraco-brachialis, are, from the irritation attending the injury, excited to contract, and thus resist the needful extension of the os humeri from the scapula.

If the above view of the subject be correct, it must be evident that the ambe, when brought into action in extending the humerus, will, in a ratio equal to the extended force, be found to have the point of action of the lever making a counter-pressure against either the latissimus dorsi or pectoralis major muscles, both of which, as shown above, are instrumental, by their contraction, in drawing down and retaining the head of the humerus in its displaced situation, and which must be freely extended before the bone can be reduced. Now, should the instrument happen not to press against either of the above muscles, but take its course between them in the axilla, it is then evident that extension alone on the humerus will prove insufficient for the reduction; because, since no counter-force is employed to retain the scapula, the latter will, from its muscular connection, follow the humerus unseparated.

Besides the above objections, which may be urged against the ambe, from the mere anatomical structure of the joint, there is another to which I can speak confidently. When the dislocated humerus has been reduced by pullies, it has always been the custom, at this Infirmary, for the professional gentlemen to point out to the pupils the necessity of horizontally and steadily pressing the scapula backwards and downwards, while a circular piece of wood, covered with linen, and placed transversely under the humerus, near its head, is elevated by two assistants, in order to complete the reduction; supposing always sufficient

elongation of the arm to have been already made. That such a practice of raising the luxated bone is requisite, while the scapula is pressed down, can be readily shown; for, if a dissection is made of the axilla, the various muscles concerned in the shoulder-joint will be found to surround the head of the humerus, excepting at its inferior, and somewhat anterior point, between the origin of the tendon of the long head of the triceps extensor cubiti on the posterior edge, and the insertion of the subscapularis on the anterior edge. The capsular ligament is here discernible, and at this point it is necessarily ruptured when the humerus is luxated.

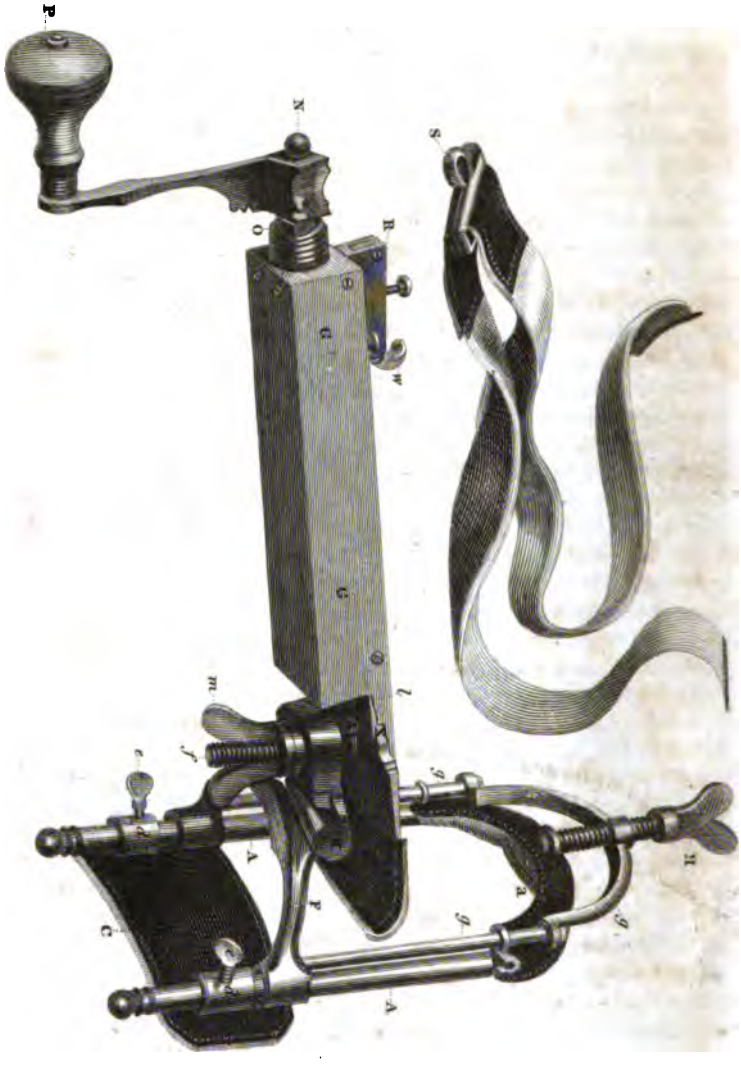
Now, since the extreme extension of the muscles about the shoulder, made by pullies, is often found not to succeed in reducing the bone, the failure must arise from the want of a proper method of fixing the scapula; for, when extension is made, the head of the humerus will inevitably, if no obstacle prevents, take its course in some measure beneath the tendon of the long head of the triceps; and if in that situation an attempt be made to raise it, it will press against that tendon, already over-stretched from extension, and carry the unsupported scapula upwards, and thus defeat every attempt at reduction.

An additional advantage from well fixing the scapula when the humerus is extended, may be further shown by the same dissection. The coraco-brachialis, with the tendon of the short head of the biceps, arise from the coracoid process of the scapula, and, to reach their insertion, take, immediately after their origin, a course somewhat circuitous, corresponding to the hemispherical shape of the head of the humerus; but if the shoulder is luxated, the above muscles, from the head of the humerus being removed, run in a right line from their origin to their separate insertions; and, by so doing, grasp, in some degree, the cervix of the bone. That this must needs be the case may be made evident by measuring the intermediate space between these muscles, which will be found of a less diameter than the head of the bone would require for its easy return into the glenoid cavity. This serious obstacle to reduction, I conceive, can be best overcome by the apparatus before me, which first fixes the scapula, and then presses the head of the humerus forcibly upwards and backwards.

I shall now proceed to describe the apparatus as succinctly as possible.

A *a* A represents the three sides of a metallic frame, whose diameter is five inches, and whose length is ten from the centre of the side *a*. The sides A A are circular polished pillars, half an inch in their solid diameters; while the side corresponding

Mr Elderton's Instrument.



Engd by W.H. Lizars.

Edinburgh Published by A. Constable & Cº 1820.

to *a* is flat, and curved a little backwards, and considerably downwards; being $\frac{1}{8}$ of an inch deep, and having attached to its upper and posterior edge, an horizontal plate, about $3\frac{1}{2}$ inches in length, and $1\frac{1}{2}$ in breadth, destined to press against the acromion process of the scapula. The under surface of the horizontal plate is padded, as well as the posterior surface of the curved side of the frame.

C is a curved metallic plate, about 3 inches broad, and well padded on the posterior side; and, by means of two broad rings, *d d*, attached to it, it will slide on the polished pillars A A, and may be made sufficiently firm on them at any elevation, by turning the small thumb-screws, *e e*, which pass through the rings, and press against the frame. F is a strong semicircular polished collar, having at each extremity a broad ring, through which the sides A A of the frame can move. The collar F is kept steady on the frame, and moved higher or lower by the apparatus *g g g*, consisting of two stout pins, which run parallel and in front of the pillars; the lower ends screw into the collar, while the upper ends are fixed to each extremity of the bow at the top of the pillars, through the centre of which the long thumb-screw H turns, having its extremity moving in a pivot on the horizontal plate attached to the top of the frame. K is a strong *ginglimus* joint, moving on the semicircular collar F, already described. Through another collar attached to this hinge, there passes a strong screw *f*, made to rise or fall by turning the apparatus *m*.

Having described so much of the apparatus appropriated to fix and make counter-action against the scapula, I shall proceed to explain the part calculated to make counter-extension on the humerus.

G G is a square case, about $9\frac{1}{2}$ inches long, and $1\frac{1}{8}$ in depth, having its bottom and sides made of polished plates. The upper plate is made strong, and extends beyond the side plates about $2\frac{1}{4}$ inches, as may be observed at *l*. Within the case described, and in immediate contact with the inner surface of the upper plate, there slides a second steel plate, X, altogether 14 inches in length, and having a superficial groove, with a cap upon its under surface, at the point *h*, to receive the head of the screw *f*, by which medium both parts of the apparatus become connected, and by which also the apparatus acquires a rotatory motion, should such be found necessary during the reduction. At N we observe the head of a screw, which passes down the inside of the case G G, its whole length. At O the screw has a collar which attaches it to the case, while, within the case, it turns in a female screw attached to that extremity of the second

plate, X, which is next the handle of the apparatus. From this construction it must follow, that by turning the handle P, the screw, revolving within the case, and passing through the female screw attached to the second plate, will carry the case backwards or forwards at pleasure, and when the arm is fixed to it, will make a steady, regular, and powerful extension. R is a lock similar to those employed for retaining the string in cross-bows; on the hook *w* it receives the ring S, to which the webbing, to be fixed by a circular roller to the arm, is made firm.

Instructions for applying and using the apparatus.

Let the patient be placed on a high stool, and the luxated arm be horizontally raised. Then, bending the fore-arm at a right angle with the humerus, place the ring attached to the webbing opposite the elbow, putting one fold of the webbing on the upper side of the arm, while the other is held beneath by an assistant. A calico roller is now to be carried several times around the arm, including the webbing; the latter, for the purpose of greater security, had better be reflected once or twice back, giving the roller several pretty tight turns to each reflection of the webbing.

The arm is now to be passed through the frame of the apparatus, and held by an assistant firm upon the shoulder, while the ring at the elbow is put over the ketch at the extremity of the extending apparatus. A few turns should be made on the screw, to give the bandage on the arm a slight degree of tension. Before we proceed to make the requisite extension for reducing the arm, we should take care that the horizontal plate attached to the top of the frame lie firm upon the surface of the acromion, and that the posterior padded surface of the top side of the frame be opposed to the extremity of that process. We must next look to the sliding padded plate at the bottom of the frame, and adjust it so as to oppose the advance of the inferior angle of the scapula. Lastly, the extending apparatus is to be brought into close contact with the under surface of the arm, by turning the thumb-screw at the top of the frame. Several turns must now be made on the extending screw, which (if the webbing is well bound to the arm) will draw out the humerus; while the frame, making counter action, steadily fixes the scapula at its upper and lower part. When we have sufficiently extended the humerus, a few turns of the elevating screw *m*, *f*, beneath the hinge K, will throw the head of the humerus into the glenoid cavity.

Northampton, April 1, 1820.

I beg leave to subjoin a certificate, in favour of the above instrument, from Dr Kerr, whose long experience, and commanding intellect, cannot fail to give very great weight to his opinion with the profession.

"I consider this instrument better calculated to facilitate, or rather to accomplish the reduction of the humerus, in cases of dislocation, than any other instrument now in use for that purpose, as has been proved in this Infirmary.

"WILLIAM KERR,
"*Superintending Surgeon.*"

General Infirmary,
Northampton, 28th March 1820.

X.

Observations on the Treatment of Hydrencephalus, with Cases. By THOMAS SALTER, Member of the Royal College of Surgeons.

IT is seldom that any subject, connected with philosophical science, obtains a complete elucidation by the labours of an individual: the successive or united exertions of intelligent minds are often requisite for the developement of truth. Thus, what in the outset of investigation was mere hypothesis, becomes at length established on immutable principles. This observation is, perhaps, more applicable to medicine than to any other department of human knowledge; and hence it is, that communications which, if taken singly, may appear of no great importance, become in the aggregate of considerable moment. I am, therefore, encouraged to draw up the following cases of hydrencephalus, with a few preliminary remarks, which, if they lay no claim to novelty, may yet tend to establish principles of practice already advanced.

Although our knowledge of hydrencephalus as a distinct morbid affection, is comparatively but of modern date, it has given rise to a good deal of discussion, and employed the pens of some of the most distinguished physicians. Since it was first discriminated and accurately delineated by our distinguished countryman Dr Whytt, it has, I believe, been viewed by the most

sanguine believers in the powers of medicine, as a complaint very difficult of cure; and, if I mistake not, there are persons who, in the present day, think it one of those disorders in which the most appropriate and well timed efforts of the physician will ever prove fruitless. Mercury, from its first recommendation by Dr Dobson to the present time, has been the medicine on which those who have entertained hopes of curing the disease have chiefly relied. Yet the success attending its employment has not equalled the expectations raised by the fortunate termination of some cases recorded by this physician, by Dr Percival, Dr Garnett, and some others.

It was unfortunate for the credit of this mineral, that, when its administration was suggested in the treatment of hydrencephalus, the pathology of this disease was not well understood, and, since further experience and an improved pathology do not warrant us in considering it in the light of a specific, or in trusting to its unassisted operation, it is not wonderful that instances should have arisen wherein its powers frequently appeared inadequate to accomplish the intentions of those who prescribed it. Indeed, it is still to be expected that, even under the most judicious use of mercury, and with other approved means, cases might occur in which the medical attendant will be obliged to witness the triumphant march of the disease with only the partial satisfaction of having somewhat retarded its progress. This, however, is no more than occasionally takes place in complaints that no one thinks of denominating incurable, such as pneumonia, pleuritis, enteritis, &c.

In giving it as my opinion that mercury is one of our chief arms of strength in combating this alarming complaint, I cannot deny myself the pleasure of expressing a belief, that the day is not far distant when hydrencephalus will no longer be considered an opprobrium to medicine; and that medical men themselves will not view it in a more serious light than many other diseases that are commonly remediable. In a prophylactic point of view, I think much may be done to lessen the frequency of hydrencephalus. Delicate children of scrofulous constitutions require great watchfulness, and a constant assiduity in the pursuit of every measure calculated to invigorate the health and to prevent the occurrence of any thing that might weaken the system; for I cannot but consider weakness, in connection with a strumous diathesis, as the parent of this disease, as well indeed as of most others peculiar to delicate children.

In its mode of invasion hydrencephalus varies considerably in different cases, and the succeeding symptoms and duration of

the complaint are much modified by the manner of attack. Upon this diversity in the onset and sequence of the symptoms, Dr Cheyne has founded a division of the disease into three classes. Were I writing an essay on hydrencephalus, I should feel it incumbent to describe its multiform appearances; but here it will be sufficient to observe, that that variety which is marked by the least prominent signs is the most to be dreaded, and chiefly because it is so commonly overlooked in its early stages.

Dr Yeates, in his letter to Dr Wall, has done much towards awakening in the minds of medical men a disposition to observe the early symptoms of hydrencephalus, as well as towards impressing upon their attention the necessity that exists for the most prompt measures to remove them. If a child be observed to be listless, laying down its head without any obvious complaint, the alarm should be instantly taken, for, in such a case, we shall seldom err in supposing that there is, at least, a disposition to hydrencephalus; for frequently no other marked or conspicuous deterioration of the health has been noticed, previously to the accession of convulsions, than these symptoms. It is not uncommon, however, for a slight convulsion to occur in the beginning, and considerably to alarm the patient's friends; yet, immediately as the fit is over, the child appearing as well as before, their fears are soon dissipated, and, though he may not afterwards have had quite his usual spirits and activity, and may perhaps have been remarked to be a little feverish at night, still the minds of the parents are not alive to the alarming nature of the complaint until the recurrence of convulsions, which may not take place for several weeks after the first attack.

It were much to be wished, that every practitioner would strongly impress upon the minds of parents the insidious nature of the disease, and the necessity there is of giving immediate alarm, on the occurrence of any symptom indicatory of its approach. For the successful treatment of hydrencephalus much depends upon its early recognition. In no other disease to which a practitioner may be called, is it of greater consequence to make an early and accurate diagnosis; for though in the infantile remittent fever, the disease which, more than any other, simulates hydrencephalus, the same mode of practice is in some measure applicable, particularly as it respects the administration of mercurial purgatives, yet we should not, in that disorder, deem it necessary to employ such measures for the relief of the head, as are imperiously demanded in the one we are considering; for if the inflammation of the meninges, which may have been produced by morbid sympathy with the viscera, be not re-

lieved by proper means, we shall often in vain attempt to ameliorate the abdominal affection, as the morbid condition of the brain, reacting upon the chylopoietic organs, will perpetuate their derangement.

I believe that Dr Curry of London, and Dr Cheyne of Dublin, were the first to point out, that hydrencephalus was often produced by a morbid sympathy of the brain, with a disordered state of the abdominal viscera, and, more particularly, with that of the liver; and it is remarkable that these gentlemen should, about the same period, and without any communication with each other, have taken so similar a view of the subject. Having many years since had the advantage of attending the lectures delivered by Dr Curry, I early became acquainted with the importance of paying attention to the condition of the abdominal organs, in the treatment of many cases of hydrencephalus. For the most part, the opinions I then imbibed on the subject, have since been amply realized by my own experience, and farther confirmed by the perusal of Dr Cheyne's book on Hydrocephalus Acutus; of which, as well as of that author's works on some other diseases of children, it is impossible to speak too highly.

In his Anatomy, Mr C. Bell has given us an excellent description of the structure and functions of the duodenum; but we are more especially indebted to Dr Yeates, for calling the attention of the profession to these morbid states, to which its several peculiarities predispose it, and to the importance that ought to be given to them in the consideration of the *ratio symptomatum* and treatment of hydrencephalus. In a former volume of this Journal, * I have shown the incorrectness of the opinion which has, I think, been too prevalent, that of considering the liver as almost exclusively the viscus, the diseases of which sympathetically produce encephalic affections; and though I still believe, that either functional or structural derangement of some or all of the viscera of the abdomen, in a majority of instances, lays the foundation of hydrencephalus, my subsequent experience has led me to think, that it is more frequently an idiopathic disease, than it has been customary latterly to consider it. Indeed, it were absurd to suppose, that the exciting cause is never to be found in the brain itself. In my opinion, the plethoric state of the vessels, and the great determination of blood to the head, in children, necessary for physiological purposes, too obvious to require recital, is, in scrofulous ha-

* Vol. XI.

bits, occasionally, at least, the only apparent cause of the complaint.

On the particular application of the remedies, in the following cases, I have but little to remark. They may by some, perhaps, be thought not at all times to have been the most judicious; they, however, were such as appeared to me at the time to be essentially required for fulfilling the three great indications in the treatment of the disease. The first of these indications I consider to be, to remove the inflammatory action of the vessels of the brain; the second, to clear the bowels, and to restore and augment the healthy secretions of the chylopoietic organs; and the third, to establish a new action in the system. In fulfilling the last indication, especially in the case of children, I have found it more convenient to give calomel than to administer mercury by inunction. I was first led to adopt this practice, from the prejudice and dread showed by the mother of Miss B. (who forms the subject of the first case,) against mercurial frictions, during my attendance upon her son, a lad of five years of age, who died of hydrencephalus in 1813. When she became acquainted with my intentions, she not only forbade the employment of mercurial ointment, but the use of that mineral under any form. This boy might possibly have been saved, had I been allowed to treat the case as I thought proper; for the omission of mercurial medicines constituted the only difference in the management of the two cases, and, as it respects their identity, I have not myself the least doubt. In this opinion I am also supported by the concurrence of both parents. Since this period, to avoid these prejudices, I have been in the habit of depending wholly upon the liberal use of calomel, to excite the mercurial action; and finding it not only equal to the mode by inunction, but superior to it, (inasmuch as, at the same time it produces its peculiar constitutional effects, it often occasions a free action of the bowels, a circumstance so urgently required in hydrencephalus,) I can with confidence recommend it to the notice of the profession, as a mode of practice from which the greatest advantages may be expected. I was much gratified at finding it adopted by so able a practitioner as Mr A. T. Thompson, to whose interesting Cases of Hydrencephalus I would beg leave to refer the reader, for some further observations on the employment of this medicine.*

The use of cold lotions to the head, as recommended by Dr

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* London Medical Repository, Vol. I.

Clarke,* instead of blistering the scalp, is, I think, a great improvement in practice. The plan, however, is not new; it certainly did not solely originate with Dr Clarke. I had myself employed it long previously to the publication of his book; indeed, two of the cases that have given rise to this communication bear an earlier date than the appearance of Dr Clarke's work.

Before I conclude those remarks, I would beg leave to make a few observations on the dilated pupil, and on the excretions from the bowels in hydrencephalus. Systematic authors have been accustomed to lay considerable stress on the permanent dilatation of the pupil, as indicative of an effusion of water in the ventricles, or upon the surface of the brain. Being a striking and obvious symptom, I was, on first entering upon practice, in common with others, in the constant habit of looking for it; but having had an opportunity of seeing several cases in which the disease terminated fatally without the occurrence of this sign, and as it is one not peculiar to water in the brain, I do not now regard it with that importance in forming the diagnosis which I was formerly in the practice of doing. In this disease, however, the pupils are undoubtedly often dilated; but it cannot wholly, I think, be ascribed to the presence of a watery fluid compressing the brain; since such accumulations occur in other diseases of that organ, as mania, epilepsia, &c. &c. without occasioning such an effect. Moreover, as in the early stages of the disease, when medical treatment has the greatest prospect of being attended with success, it is more common to find the pupils contracted, in a diagnostic point of view this symptom cannot then, at such a period, be considered of much moment. Yet how often do we see practitioners searching in the early stages of hydrencephalus for a dilated pupil?

As the effusion of an aqueous fluid within the cranium is, with very few exceptions, preceded by an inflammatory action of the blood-vessels of the membranes of the encephalon, I conceive that the absence of the contractile power in the circular fibres of the iris, as well as the strabismus, imperfect vision, and coma, may more correctly be all ascribed to the accelerated motion of the blood in the brain, exhausting its excitability, and impairing its functions, than to the presence of water upon the surface, or in the cavities of that organ. †

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* Commentaries on some of the most important Diseases of Children. By J. Clarke, M.D. 1815.

† On the subject of effusion within the cranium, more correct views are be-

By taking this view of the phenomena, much of the obscurity that envelopes the subject is, I think, removed; and we can readily understand why the pupils should be dilated in some cases, and not in others. If the above explanation be correct, the pupils are most likely to be dilated in those instances in which the inflammatory action has been most violent; and my experience concurs to confirm this opinion: for in those cases that I have seen, where the pupils retained their natural appearance, the inflammation was more of the atonic kind, the eyes were but little suffused, the conjunctiva retaining a healthy aspect nearly to the last. In two of these cases, vomiting was the most prominent symptom. In one of them, about three ounces of fluid were found in the ventricles; in another, five ounces; and in a third fatal case of the disease, I have observed in my notes, that the pupils were only dilated during the convulsive fits which occasionally occurred. At other times, they were of their proper size, contracting and dilating naturally on the application and withdrawment of light.

In the fourth volume of the Transactions of the College of Physicians, Dr Baillie relates a case of hydrencephalus in an adult, in which the pupils were not dilated, and the sight was perfect. In the fifth volume of the same Transactions is a remarkable instance given by Dr Heberden, of an old man in whose brain twelve ounces of fluid were discovered after death, and the only symptom in this patient, indicative of an encephalic affection, was a deafness that had existed ten years. This case strikingly shows how large a quantity of fluid may be accumulated in the brain without producing the ordinary signs of pressure, if the functions of the organ be not destroyed by a sudden and violent excitement. In syncope, the pupils are frequently dilated. What is the state of the circulation within the cranium in syncope? If we can form a judgment of the state of the capillary vessels of the brain from an observation of those of the surface of the body, we may suppose that the former are, like the latter, nearly in a state of collapse. Admitting, however, the doctrine of the incompressibility of the brain, the ve-

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ginning to be entertained. My remarks were written immediately after the occurrence of the last of these cases, now more than two years ago. But, from circumstances unnecessary to be explained here, they were not forwarded for publication. I have since been much pleased at finding them so nearly to coincide with the opinions expressed by Dr Abercrombie in his valuable communication in the 14th volume of this Journal. Similar views appear also to be entertained by the review of Dr Coindet's work on Hydrencephalus, given in the second number of the Quarterly Journal of Foreign Medicine and Surgery.

nous system of the encephalon will be in a condition of proportionable turgescence, and the blood will necessarily be nearly arrested in its course, or it will move but slowly on towards the heart; yet, should we reject this hypothesis, it must be allowed that there is both a deficiency of blood in the vascular system of the head, and a languid circulation. In either case, the effect will be the same,—a diminished developement of sensorial power. Here, then, we have the same effect produced when the circulation in the brain is imperfectly carried on, as follows a preternatural activity of its vessels, which I think is corroborative of the opinion I have advanced,—that some of the symptoms in the latter stages of hydrencephalus do not so much arise from pressure as from exhausted excitability of the brain.

Although a dilated pupil is not a necessary consequence of hydrencephalus, it is not on that account to be disregarded, when it does occur; for, in whatever way we may account for the phenomenon, it cannot but be considered as an unfavourable symptom, as well as in some degree the measure of the injury done to the brain. But he who waits for the occurrence of this sign, before he takes decisive steps for the relief of his patient, will very frequently have let slip the golden opportunity in which he might have prescribed with some prospect of success.

In apoplectic attacks, in which there are extravasations of blood into the substance or ventricles of the brain, it is not, I apprehend, so much from pressure, abstractedly considered, that the pupils are dilated, as from the tearing up of the substance, and the consequent partial or total annihilation of the functions of the organ. For it matters not whether the sensorium be destroyed by an undue excitement or momentum of blood, or by a sudden disorganization; the results are the same. Indeed, the way in which pressure itself, apart from any structural derangement, operates, is, I conceive, by suspending the powers of the sensorium. This opinion derives equal support, however we may explain the *modus operandi* of pressure, whether we consider the compressing cause as operating upon the cerebral substance, or upon the blood-vessels obstructing the circulation; a due supply and equal distribution of blood, and a natural disposition of the fibres which compose the brain, being alike essentially necessary to the existence and exercise of its functions. If any thing were wanting to prove, that what are commonly supposed to be symptoms of compression of the brain are not always the effect of mechanical pressure, I think that the cases of apoplexy related by Mr Abernethy and other authors, in which all the genuine symptoms of the disease occurred, and yet, on examination after death, no diseased appearances were

to be discovered, must be sufficient to convince the most incredulous. And the instances of well marked and acute cases of hydrencephalus that occasionally take place, in which no effusion is found, prove indubitably the same thing.

In these reflections, I have taken no notice of the disputed opinion of brainular absorption, (whether or not, for the purpose of obviating the effect of pressure, effusion be always preceded by the absorption of the matter of the brain.) This is a subject in pathology which presents very difficult, if not insurmountable, obstacles to a satisfactory solution; and the determination of the point would not, that I am aware, at all affect these remarks; for if absorption of the brain does take place, as some pathologists suppose, pressure cannot of course occur; and if it does not, facts and morbid anatomy teach us, that the organ has an inherent power of accommodating itself to the degree and kind of pressure that exists in hydrencephalus.

It now only remains for me to make a few observations upon the alvine excretions. In all corporeal diseases, it is very justly thought, that much information is to be obtained, by attending to and observing the nature of these discharges; but in no disease is this more important than in the one under consideration.

Dr Fothergill observes: "The stools are most commonly of a very dark greenish colour, with an oiliness or a glossy bile, rather than the slime which accompanies worms." * This account pretty accurately accords with that given by subsequent writers, and for the most part coincides with my own observations. The pitchy or tar-like appearance of the stools, which is sometimes present in this complaint, is of less frequent occurrence. In one fatal case of hydrencephalus that I attended, the patient passed several of this description a short time before death. Dr Cheyne supposes these green gelatinous evacuations to be wholly a mixture of dark bile, and of the mucus of the intestines. In the conjecture that they are chiefly composed of bile and mucus, he is probably correct, and the bile, if submitted to the test of chemical analysis, may not be found perfectly natural. In many examinations made for the purpose, in persons who have died of this disease, in no one instance have I been able to discover dark feculent matter, such as had been previously ejected from the bowels, above the colon. The small intestines were turgid with a bilious fluid of a natural hue; and the bile in the gall-bladder was, in appearance, of the most healthy quality; and in

* Medical Observations and Inquiries, Vol. IV.

other diseases of children, in which green stools have been frequent, my investigations *post mortem* have invariably showed similar results. These circumstances have led me to the conclusion, that we are not yet acquainted with all the morbid changes that take place in the bilious and intestinal fluids, or what deviation from their natural state is necessary for the production of these dark green evacuations. I do not, however, mean to assert, that bile never comes from the gall-bladder having the dark green aspect which characterizes these stools; but only in many dissections, carefully conducted, I have entirely failed in finding it of such a colour, either in that receptacle, or in any part of the alimentary canal above the termination of the ileum. This I think proves, that it is not at least so common an occurrence, as, judging from the tenor of their writings, medical men have in general supposed. Mr Burns of Glasgow seems to think that this colour of the alvine evacuations may arise from the presence of acid in the intestinal tube; and as alkaline medicines do occasionally effect a healthy change in their appearance, it is perhaps not an improbable conclusion. Constitutional irritation, arising from any cause, will generally produce green stools in children. This is shown by their occurring, more or less, in almost all infantile diseases; and calomel, which is so much given for the purpose of ameliorating the biliary secretions, I have had ample proof, will very frequently give rise to them. In the treatment of the diseases of children, I have often thought it necessary to discontinue the use of the submuriate of mercury, that I might be better enabled to ascertain the real state of the hepatic system. From these observations, I think we may deduce the following practical conclusion,—that we shall often fall into error by judging hastily of the state of the liver, from the appearances exhibited by the intestinal evacuations, without giving sufficient weight to causes, which we must admit may often exist in the alimentary canal, capable of producing great changes in the aspect and nature of healthy bile.

Cases.

Case I.—*January* 9, 1815.—Miss B. aged 9 years, of a spare and delicate habit, for some time past has been visibly falling off in her general health, and for the last eight days she has complained greatly of her head, chiefly in the sinciput. She has taken some powders, containing each a grain of calomel, and five grains of the hyd. cum creta, from which at first she seemed to derive considerable benefit, but is now much worse, and the pain of the head is very distressing. The pupils are contracted, the brows corrugated, and the light is extremely painful to her; tongue white; skin hot; pulse 100; bowels

open; urine high-coloured. In July 1813, she lost a brother five years old, in hydrencephalus. The symptoms, in the early part of the disease, being so like what she now has, her parents are very naturally much alarmed for her safety. I wished her at this time to lose blood, but she has unfortunately been greatly indulged, and cannot be brought to submit either to the use of the lancet, or the application of leeches. I have directed a blister to be applied upon the nape of the neck, and ordered for her the following powders:

℞ Pulveris radicis jalapæ, gr. xlviii.
Hydrargyri submuriatis, gr. xviii. Misce, et distribue in chartulas sex. Sumat i. quartis horis donec alvus bene purgetur.

10th, 10 o'clock, A. M.—The blister has risen well. She has been sick, and has vomited; had five dark, fetid stools. She has complained much of her head, which feels very hot; she is now asleep; pulse 80. I ordered rags wetted with cold vinegar and water to be constantly applied to the forehead.

Capiat hydrargyri submuriatis gr. iii. omni trihorio.

11th, at noon.—Has passed a tolerable night, and is now in less pain. She has had several copious, dark-green and glossy evacuations from the bowels. The eyes look more lively, skin cool, tongue cleaner, pulse 100.

Continuetur hydrargyri submurias.

10 o'clock, P. M.—She again complains of violent shooting pains in the head, which also feels hotter, and the heat of the general surface is increased; tongue more furred; the eyes look dull, and the sensibility of the retina is so augmented, that it has been necessary to darken the room. She has a great aversion from moving, even in bed, and cannot for a moment support her head from the pillow; pulse 100. She was now prevailed upon to lose a little blood. Six ounces were immediately taken from the arm. The blood was sizy.

Repetatur hydrargyri submurias.

12th, 10 o'clock, A. M.—Had a restless night; suffered a good deal from the pain in the head; had one motion of the same character as the last; it is the only stool since yesterday morning. Tongue somewhat cleaner; pulse 100. Six grains of jalap were ordered with the next dose of calomel.

8 o'clock, P. M.—Complains but little of her head, though she does not attempt to raise it from the pillow. The brows are corrugated; skin moderately cool. She is now asleep, and has been much disposed to doze. The jalap has procured but one evacuation, which is of a dark-green colour, and slimy.

Pergat in usu hydr. submur.

13th, 10 o'clock, A. M.—She has been very sick in the night, and has had an increase of pain; pulse 125; had two small alvine evacuations.

℞ Magnesiæ sulphatis ʒii.
Infusi sennæ tartarizat. ʒviii. Fiat haustus simul capiendus.
Continuetur hydrargyri submurias.

9 o'clock, P. M.—Has slept more to-day than usual; vomited several times; the pain in the head continues; has had two stools, in appearance the same as those previously passed; they float in the fluid, and do not communicate any bilious tinge to it. The urine is copious and pale. The eyes look brighter, and the pupils, though now rather large, contract promptly. Tongue moist, yellow at the back, white at the point and fore part; skin hot; pulse 120; takes but little nourishment. Her breath has the mercurial taint.

Apponatur emplastrum lyttæ inter scapulas.

Persistat in usu hydrargyri submuriatis.

14th, 11 o'clock, A. M.—The blister was not applied till early this morning. Has passed a tolerable night; skin hot; pulse 160; had two stools, much improved in character.

Continue the calomel.

9 o'clock, P. M.—Has vomited several times to-day. She says her head is better. The skin is hot; pulse as in the morning. She is exceedingly weak, unable to stand, or even to move in bed without assistance.

15th.—The face is swollen with the calomel, and the saliva flows freely. She has had a good night; her appearance is greatly improved; she looks more lively, and talks freely and intelligently; she has had four or five stools, slightly tinged with blood; the head is now quite free from pain.

Omittatur hydrargyri submurias.

9 o'clock, P. M.—She continues much in the same state as reported this morning; is quite free from pain, excepting in the mouth, which has bled a little this afternoon, from the surface of a small ulcer. Ptyalism considerable; tongue nearly clean; pulse 120; no stool.

℞ Magnesiæ sulphatis ʒiv.
Infus. rosæ ʒvi. Fiat mistura de qua sumat cochlearia tria larga sextis horis.

16th.—Sleeps well at night; bowels open; feces natural; urine copious and straw-coloured; pulse 100; appetite improves. She got out of bed this morning with but little assistance; salivates freely.

Continuetur mistura.

19th.—The bowels are regular, and the evacuations natural; appetite tolerably good; mouth much better; salivation diminishing.

Discontinue the mixture.

℞ Acidi sulphurici diluti m. viii.
Tincturæ cardamomæ compositæ ʒss.
Decocti cinchonæ ʒx. Fiat haustus ter die sumendus.

25th.—She walks out, and, with the exception of a slight tenderness of the mouth, and weakness, is now entirely well.

Case II.—*May* 5, 1815.—I was desired to visit Mrs Hiscroft, whom I found complaining of constant and severe pain of the head, variable in its degree, but occasionally so violent as to make her

scream out. She is unable to raise her head from the pillow; a very manifest preternatural heat is communicated to my hand, when applied to the forehead; she has nausea, and has frequently vomited, but has obtained no relief from it; the eyes have a heavy aspect, and are averted from the light; tongue dry and white; pulse irregular, varying from 70 to 80; bowels constipated; there is a considerable thirst. The patient is about 30 years of age, of a dark complexion, tall, and thinly made; she has been married several years, but has never born a child. She attributes her illness to taking cold five days ago, whilst menstruating, which produced a cessation of the catamenia two days sooner than usual. She is at this time ordered some aloetic pills, with calomel, every three hours, until they purge the bowels; afterwards to take the common saline mixture in a state of effervescence, and to have a blister applied to the nape of the neck.

6th.—The pills have operated very freely, and the blister has risen well; however, all the symptoms continue, and with undiminished violence. Apply two leeches to each temple, and continue the saline mixture.

7th, 10 o'clock, A. M.—The orifices made by the leeches bled freely, yet the severity of the symptoms is not mitigated. She was slightly delirious yesterday, though there is not to-day any aberrations of the mind. I now took ten ounces of blood from the arm, and directed the head to be shaved, and to have linen kept wet with equal parts of vinegar and water (cold) constantly applied to it. No stool. The aloetic pills, with calomel, and the saline mixture, to be continued.

8 o'clock, P. M.—Since the bleeding the pain has not been quite so violent. The blood is sizy, but not cupped. The lotion has been assiduously applied to the scalp. There is still a morbid sensibility of the retinæ, and the eyelids are constantly closed to exclude the light; the brows are knit, and the countenance expressive of great distress. The patient has not vomited during the day. Urine small in quantity and high-coloured; tongue furred; thirst considerable; pulse 72. The pills have not operated.

℞ Magnesiæ sulphatis ℥i.
Infus. sennæ tart. ℥vj. Fiat mistura cujus sumantur cochlearia tria magna tertiâ quâque horâ donec alvus bene respondeat.

8th, 10 o'clock, A. M.—Slept, in the whole, during the night, about three hours. There has been no sickness. All the mixture is taken; it has produced several dark and fetid stools. The pain of the head is less; the tongue is white; great thirst. Pulse 66.

Continuetur lotio.
Capiat hydrargyri submuriatis gr. iii. tertiis horis.

8 o'clock, P. M.—The excessive thirst still continues. Tongue white at the edges, dry, and of a brick-red colour in the middle; skin hot; pulse 80. She has had several dark-green and offensive alvine evacuations. The pain has been increasing the whole of the

day, and is at this time very severe; the least motion of the head greatly augments it. The urine, which is small in quantity, is high-coloured. She was now again bled, and had a blister applied behind each ear; also directed to continue the use of the calomel.

9th, A. M.—The blisters have occasioned a copious serous discharge. The calomel, of which she has now taken eighteen grains, has purged her considerably. She is in less pain, and can bear the light better; the tongue is still furred, but not so dry; pulse 84. Apply six leeches to the temples, and let ten drops of the tincture of digitalis be taken with each dose of the submuriate of mercury.

9 o'clock, P. M.—The leeches produced a copious discharge of blood. She complains a good deal of the blisters, but is nearly free from pain in the head; was sick in the early part of the day and vomited. The tongue is cleaner and moist. The condition of the retinæ is completely changed. She can now look full at the light, but sees objects very imperfectly, though there is nothing remarkable in the appearance of the eyes. Urine passed during the day about a pint, high-coloured, and without sediment.

Persistat in usu hydrargyri submuriatis, et tincturæ digitalis.

10th.—Slept several hours last night; passed three dark-green stools. Within the last three hours the pain of the head has been increasing.

11th.—The breath is slightly mercurial, and she complains of some soreness of the mouth, but there is no salivation. There have been four or five stools of a similar character to the last. The urine deposits a lateritious sediment. The head is easier, but the shooting pains, when it is lifted from the pillow, are still experienced. Pulse 80. She dislikes the digitalis, and refuses to take any more of it. Her opinion is, that the cold lotion to her head affords her the most relief.

Continuetur hydrargyri submurias nocte et mane.

12th.—Since yesterday morning the appearance of the patient is greatly changed for the worse. She is very lethargic, and cannot keep her eyes open without constant exertion. She complains less of the head than of a general uneasiness over the body. Is frequently sick; the least motion produces vomiting. The pupils are considerably dilated, and she scarcely sees any thing. Skin cool; thirst less; pulse 70.

There has been no discharge from the bowels for twenty-four hours. The case is now evidently verging to the second stage of the disease. Some effusion has most probably taken place.

℞ Pulveris jalapæ ℈i.
Magnesiæ sulphatis ʒii.
Infusi. sennæ tartarizati ʒviii. Fiat haustus quamprimum sumendus.

℞ Hydrargyri submuriatis.
Pulveris radicis scillæ āā gr. iii. Fiat pulvis omni trihorio capiendus.

9 o'clock, P. M.—The opening draught was returned from the stomach; and, having had no stool, she took in the early part of the afternoon two pills containing four grains of calomel and eight of the ext. colocynth. comp. She has since had a copious green motion. Pulse 80. The appearance of the eyes and vision do not differ from the report made in the morning. As soon as the bowels were open she began taking the powders of calomel and squills.

Applicetur emplastrum lyttæ inter scapulas.

13th.—The blister has risen well. The pupils, though much dilated, are not as large as they were yesterday; but the vision is equally imperfect, and the eyes have the vacant expression observed in amaurosis. There is now no pain in the head; tongue much cleaner and moist. The face is swollen from the mercury, and there are several mercurial ulcers in the mouth. The bowels have been much purged, and vomiting occurred several times during the night. Pulse varying from 80 to 88.

Repetantur pulveres.

14th.—The patient is much in the same state as reported yesterday. The chief and most striking symptoms are great prostration of strength, and dilated pupils, with impaired vision. Pulse 80.

℞ Hydr. submuriatis
Pulveris radicis scillæ, aa gr. xviii.
——— digitalis gr. iii. Misce et divide in portiones æquales sex, de quibus sumat unam quartis horis.

15th.—She has had one copious and more natural motion, and has also passed, in the last twenty-four hours, a quart of urine, which greatly exceeds the quantity evacuated in the same period since the commencement of her illness: it is without sediment, and not of so high a colour as the urine was observed to be in the early part of the disease. She does not yet see any better, and the eyes in every respect remain the same. The mouth is very much complained of, but the ptyalism is moderate. Pulse 72.

Continuentur medicamenta.

16th.—I called upon my patient last evening, and found the pulse as low as 66, which I thought might have been effected by the digitalis: they are now 80; and, as the medicine has not been regularly given during the night, that notion appears the more probable. The slightest motion of the body in bed increases the frequency of the pulsations; the pupils are dilated, and the vision is evidently improved. The feces are more natural in colour. Ptyalism very considerable.

Continuentur pulveres. Omittatur lotio.

18th.—To-day, for the first time, she thinks herself better. Vision much improved; bowels regular; urine deposits a lateritious sediment; somewhat more than a quart is passed in 24 hours.

21st.—She is progressively getting better. Pulse 75; the alvine discharges, though not quite natural, are greatly improved in character; vision nearly perfect. She finds herself excessively weak.

Hitherto she has taken scarcely any thing but gruel and toast-water. A more nutritious diet is now allowed her, as there is some inclination for food. Discontinue the powders.

℞ Pulveris radicis scillæ gr. v.
——— digitalis gr. i.
Pilulæ hydrargyri gr. iv. Fiat bolus nocte maneque sumendus.

℞ Tincturæ cinchonæ compositæ ℥ss.
Decocti cinchonæ ℥vss. Misce, pro mistura, cujus sumat cochlearia tria magna ter quotidie.

27th.—With the exception of slight debility, there is now no complaint; vision is perfect, and the pupils are contracted to their natural size, which is small; the mouth continues sore, but the ptyalism is diminished; appetite good. The medicine is discontinued. She has taken 173 grains of calomel, besides what was contained in the opening pills, and 24 grains of the blue pill.

Case III.—*February* 3, 1816. Jane Willis, aged three years and six months, is of a fair complexion, with light hair, and blue eyes. She is small, and remarkably delicate in her appearance. In her infancy, she with difficulty recovered from a severe attack of pneumonia. Since this illness, she has rarely been well for any considerable period: her abdomen has been hard; bowels costive; and the stools often clay-coloured. She was last evening seized with a violent convulsion, which was preceded for two or three hours by a headach. This morning there was a return of the fit. A good deal of pain is complained of in the head. When asked where it is situated, she applies her hand to the vertex. The pupils are contracted, and the light gives her pain. She is at this time very irritable; answers questions clearly, and very distinctly, but with evident impatience. The tongue is covered with a white fur; skin hot; face flushed; pulse 150. She has been sick, and twice vomited. A leech was directed to be applied to each temple.

℞ Hydrargyri submuriatis gr. xii.
Pulveris jalapæ ℥ss. Misce, et divide in chartulas sex. Sumat unam tertiâ quâque horâ donec alvus bis terve respondeat.

4th.—The blood flowed freely from the orifices made by the leeches; and, though no more than two were applied, she fainted, for a short time, from loss of blood. Three of the powders having been taken, without producing any effect upon the bowels, she had yesterday afternoon a purgative enema, and she took in the night two powders, each containing a grain of calomel and a grain of pulv. antimonial. since which the intestines have been copiously evacuated. The discharges at first had a natural appearance; latterly, however, they were dark, and very offensive. Since the time the *glyster* was given, she has not been sensible, nor has she taken the least notice of any thing. Passed a restless and feverish night, frequently screaming vio-

lently; pupils contracted; pulse 120. I directed that she might be kept as much as possible in the erect posture, and that the head might be shaved, and have the following lotion constantly applied to it.

℞ Spt. æther. sulphuric.
—— vini rectificat.
Acid. acetos. āā ʒii. Fiat lotio.

℞ Hydrargyri submuriatis gr. xii. in portiones equales viii. dividenda; sumat i. tertiis horis.

5th.—She had one dark-green stool yesterday, and two of the same kind in the night, but she passes both feces and urine without giving any information of it; of course, neither the quantity nor the quality of the latter can be ascertained. A blister was applied last night to the nape of the neck; it has risen well. She is now asleep; breathing natural; skin cooler; pulse 120. The abdomen feels soft. On lifting one of the eye-lids to observe the state of the pupil, it was found to be contracted almost to a point; but the child being roused by it, it became instantly dilated, almost to the whole extent of the iris. At the same time, the nostrils were expanded, the hands clenched, and she screamed violently. Continue the lotion and powders, and apply a leech to each temple.

6th.—The leeches occasioned a considerable discharge of blood. Had three green stools since the last report. She lies with eye-lids half open, but closes them when a candle is brought near. The pupils are not so small; they contract when the eyes are exposed to light; the vessels of the conjunctiva are turgid; and there is increased secretion from the meibomian glands. She swallows a little gruel when it is put into her mouth. Passed a restless night; pulse 130.

Continuentur pulveres.

7th.—Accidentally calling upon my little patient yesterday afternoon, I found her moaning most piteously; her skin was hotter, and the pulse more frequent, than in the morning; the pupil of the right eye was considerably dilated, and sluggish in its movements; that of the left was also larger than it had been observed to be. As she had had no motion for several hours, I gave her, at once, two drachms of castor oil, which, by the evening, (when I again saw her,) had procured one stool. She was then moaning as before, and continually moving her right hand towards her head, whilst the left lay motionless by her side. Has had rather a better night, and passed another dark green stool. She is now fretting, and the countenance has an aspect of great distress; the tongue is moist, though furred at the back part; the dilatation of the pupils observed yesterday is nearly gone; there is, however, slight strabismus. The blisters have discharged copiously; pulse 130.

Continue the calomel.

8th.—She slept four hours yesterday, and had one stool of a similar character to most of the preceding evacuations; she also passed a considerable quantity of urine. The eyes look more natural; but, as she

tinues to get about the room, by the help of the chairs and tables, like a child who is learning to walk. The tongue is clean; pulse 90; bowels regular; and stools natural.

Go on with the medicines as before.

26th.—With the exception of slight weakness in the left arm and leg, the child appears to be in as good health as before the attack; she is both able to walk and to use her arm tolerably well; the appetite is good, and all the secretions natural.

She is allowed to leave off medicine.

29th.—I was requested to visit my little patient again this morning, not on account of any return of her complaint, but in consequence of the stools having assumed an unhealthy appearance; which circumstance, should it occur, I desired to be immediately informed of. Their unnatural appearance consisted merely in a deficiency of bile. I ordered the hydr. cum. creta to be resumed; and in a few days the discharges were again natural.

Poole, October 4, 1819.

XI.

Observations on the Diagnosis of Hydrocephalus Acutus; with a Case. By Dr Dickson, F. R. S. Ed. & L. S., Fellow of the Royal College of Physicians in Edinburgh.

Authors have very generally admitted a strong resemblance between the symptoms of acute hydrocephalus, infantile remittent fever, and worms; and the difficulty, and even impossibility, in some cases, of distinguishing between the two first diseases especially; as there is scarcely a symptom belonging to the one which has not been occasionally observed in the other.

As respects water in the head, the difficulties in which the diagnosis is involved will not excite surprise, and we must conclude with Dr Abercrombie, that "we have no certain marks by which we can ascertain the presence of hydrocephalus," if, from a review of the pathological facts contained in his important paper on chronic inflammation of the brain, we admit the following apparently legitimate inferences:

"1st, That, in cases of hydrocephalus, the coma and other symptoms are not to be considered as the direct effect of the effusion, but of that morbid condition of the brain of which the effusion is the consequence.

"2d, That we have no certain mark which we can rely upon as indicating the presence of effusion in the brain. Slowness of the pulse, followed by frequency, coma, squinting, double vision, dilated pupil, and paralytic symptoms, may exist without any effusion."—(Edinburgh Medical and Surgical Journal, Vol. XIV. p. 323.)

In a memoir on the acute cerebral congestions of infancy, lately published by the Medical Society of Emulation in Paris, a nearly similar conclusion has been drawn by Dr Lasserre, who is of opinion, that the presence of serum in the ventricles of the brain, instead of being necessary to the production of the symptoms of this disease, is only to be regarded as a secondary object, or invariably as an effect of a primary increase of action in the parts naturally destined to secrete this fluid, from irritation, local or sympathetic. But to return to the more immediate object of this paper. Where the usual precursory appearances are followed by those of inflammation, or excitement of the brain, and when these in turn are succeeded by symptoms of compression—such series of symptoms corresponding with the progressive changes usually remarked in acute hydrocephalus,—there can be little doubt of what is going forward; but, when the primary stage has not been witnessed, or the symptoms of excitement have been obscure, or have passed rapidly over, and the patient is found by the physician, as it were, at once overpowered by coma, it becomes as difficult as it is important to decide whether the oppression of the brain depends on sanguineous congestion, or has arrived at the almost hopeless stage of serous effusion; and the indications of treatment are accordingly unsatisfactory and vacillating, in proportion as the appearances which countenance the one or the other suspicion predominate. Such was the state of the case about to be detailed; and, after what is premised on diagnosis generally, I shall leave it to others to determine whether or not it deserves to be regarded as an instance of hydrocephalic effusion. If the patient had died, few, I believe, would have hesitated to draw such a conclusion, even without the aid of *post mortem* investigation. Of this I am certain, that I have seen several fatal cases of hydrocephalus, proved to be such by dissection, where the symptoms of this disease were not nearly so well marked as in the present instance. If the reader should not assent to the justness of this conclusion, it can only arise from impressions in my report of it; for I have to regret that I did not make fuller notes at the time, and have been cautious of filling up deficiencies from memory. I shall, therefore, content myself with remarking, that the progressive symptoms accurately resembled

those described by Dr Cheyne, which, whatever may be the difficulty in the early period, exhibit a striking picture of the advanced stage of acute hydrocephalus:—"How (he remarks) can we mistake, when we see a child rolling his head on the pillow, or perhaps sawing the air with one hand while the opposite side is palsied, with a hectic on the cheek, his eyelids half concealing the pupil, and the eye deprived of its vivacity by the flimsy covering of the cornea; the complete dilatation of one or of both the pupils, and the suffusion of the adnata; drawing a long sigh; frequently grinding his teeth; quite incoherent, or in a state of complete insensibility, with a burning fever in his skin, or sweat forced from every pore; and all these symptoms alternating with, and at last finished by apoplectic breathing and violent convulsions."—(Essay, p. 22.)

Squinting, which depends on the unequal power of the muscles which move the eye, I did not observe in the following case; indeed the eye seemed motionless, and all its muscles to be paralysed for some time. Neither did I perceive the "pulsus tardior," and it has also escaped the notice of others, though doubtless, in well marked cases, there is a foundation for such a division. In the present example, from the convulsive agitations of the child, or the succeeding exhaustion, it became extremely difficult to estimate the pulse on some of my visits; but generally it was very quick, and it was always more or less accelerated whenever I could correctly ascertain the state of the circulation. Illustrative of the existence of effusion without these occurrences, and of the great extent to which it may gradually take place without inducing symptoms of pressure, may be adduced, amongst others, a remarkable case of hydrocephalus, recorded by Dr Male, in the ninth volume of the Edinburgh Medical and Surgical Journal, in which, "on opening the ventricles, a quantity of fluid, measuring *three quarts*, escaped." Notwithstanding the presence of this enormous quantity of water in the head, "strabismus never occurred at any period of he disease, nor any spasmodic affection, nor was the pulse ever slower than natural, but frequently quicker, accompanied by slight fever. Fatuity, which is the usual concomitant of the advanced stage of the disease, did not exist; on the contrary, the mental faculties were not in the least injured, and the child was as quick and sensible as children of that age usually are."—(*Loco citato*, p. 398-9.)

After adverting to the difficulty of discriminating in some cases, it may not be improper to notice some of the symptoms which are considered as more especially belonging to hydrocephalus acutus, and as chiefly distinguishing it from febris infan-

tum remittens. These are, aversion to light, even early in the disease; knitting the brow; rubbing the back of the head on the mother's arm, and endeavouring to thrust the head backwards; fits of screaming; strabismus, and moving the hands about the head; while in the infantile fever, as Dr Pemberton judiciously observes, "though the hands are often carried to the face, it seems to be more from an inclination to pick the skin from the lips, eyes, and nose, than occasioned by the painful restlessness which attends the hydrocephalus internus." (See his useful "Practical Treatise," &c. 4th ed. p. 166.)

It has also been attempted to found a diagnosis upon the remissions in the one case, and in the other, on the state of the excretions, vomiting, inability to bear the erect posture, and other symptoms; but none of them can be depended on individually; it is only from the assemblage of symptoms, the manner they are grouped, and the order of their succession, that we can deduce the existence of hydrocephalus. In the subjoined case of Harriot Buckland, the alvine discharges were extremely offensive, generally very dark, or even black, and sometimes green; but I regret, from not having attended particularly to this point at the time, that I am unable to say whether they were ever of that kind which some have denominated hydrocephalic, and upon the cause of which a difference of opinion exists. Dr Fothergill and Dr Cheyne give a similar description of their appearance. The latter author, in his very valuable Essays on Water in the Brain, observes, "Stools of the same nature with those which are generally passed in hydrocephalus, are seldom seen in any other disease. They resemble boiled liver, forming a dark-green gelatinous mass, with an oily-looking surface, and are of a sickly, but not fetid smell; they consist of flakes of inspissated bile, which gives them their colour, and of the mucus of the intestines. Diffused in water they do not render it turbid, and scarcely change its colour." (Vide 2d ed. p. 64.) Some other practitioners, on the contrary, as Dr Armstrong and Dr Porter, consider those dark-green glossy motions as arising from the exhibition of calomel. Notwithstanding the weight I attach to the talents of these able physicians for observation, I distrust this, at least as a general conclusion; because, although I am aware that the use of this medicine, in many cases, does produce motions of a green colour, I have seen the substance in question, which the latter gentleman has not unaptly characterized as resembling green "turtle fat," where no calomel had been administered for at least some weeks before, and if then, in a trifling dose only. I observed it particularly in one girl, seven years and a half old, at the com-

mencement of a very severe attack of abdominal inflammation; and in another aged four years, the same matter was voided in considerable progress of formation, less perfect indeed, but the identity appeared to me unquestionable, though the child manifested only slight signs of indisposition, and has since been in perfect health. In both instances it was produced, or, I should rather say, brought away, by an infusion of senna; and I therefore lean to the opinion of the enlightened editor of the Medico-Chirurgical Review, that calomel, especially when it gripes much, (and, for the same reason, senna, &c.) dislodges green and fetid secretions, rather than creates those coloured evacuations." (Vol. I. pp. 596, 597.) Their fetor, however, must depend on the admixture of other matters; for the peculiar green gelatinous substance in question is almost inodorous, or rather, it has a sickly or faint medicinal smell, somewhat, I think, resembling that of jalap. I have subsequently seen this matter again brought away from the first of these children, after taking the senna mixture, though the motion preceding it had a nearly natural appearance; and I remarked that she complained previously of more griping than usual. I am therefore disposed to consider such dejections not as pathognomonic, nor peculiar to the disease in question, but at the same time as indicating a disordered state of the hepatic and intestinal secretions, requiring our most watchful attention, as it may predispose to, or, if not remedied, may terminate in, hydrocephalus.

The question here alluded to would at first sight appear to be of much easier solution than it really is; for, from the facility with which calomel is given, and its great value in the diseases of children, few practitioners, I believe, would deem themselves justified in omitting mercurial purgatives, when the symptoms threatened the invasion of this fatal disease. In the latest case of hydrocephalus which I have witnessed, the appearance of the stools certainly changed after the exhibition of calomel, at least, the first motion which I saw consisted of glairy, dirty, yellow mucus. They afterwards became, and continued to the last, of a dark-green colour, like spinage, extremely viscid and tenacious, which appeared to depend on the very glutinous nature of the intestinal mucus, with which the bile was mixed; but they had not that glossy gelatinous appearance above described. In this very deceitful case, under the external and internal use of mercury, there was a gradual improvement of the sensorial powers during the last five days; and after having lain in a state of insensibility for more than twice that period, the speech, vision, and intellect, were in a great degree re-

stored. Small quantities of yellow recent feculent matter appeared among the green in the two last motions; the secretion of urine was copious; and the little patient opened his eyes, and followed my movements in every direction only a few hours previous to his death.

Much light has been thrown upon the pathology of hydrocephalus of late years; and, as has been already adverted to, instead of the effusion of serum in the ventricles being regarded as the primary disease, or the cause of the more dangerous symptoms, it is now believed to be the effect or consequence of cerebral inflammation, or excitement, or of venous congestion, from irritation of the brain, original or symptomatic. For the latter view of the subject, we are more especially indebted to Drs Cheyne and Yeats, whose excellent publications have forcibly directed attention to the digestive organs, as the "Fons et origo mali," by showing how very frequently this disease arises from a disordered state of the chylopoietic viscera.

One of the latest contributions to our pathological knowledge with which I am acquainted, is from the pen of Dr Porter, who ably contends, that the disease in question is not phrenitis, (though he admits that inflammation of the meninges may be superadded,) but an inflammatory condition of the posterior arteries of the encephalon, and of the base of the brain.—(*Vide* Medico Chirurgical Journal for January 1819.)

It would be altogether diverging from the intention of these fleeting remarks, to enter upon the reasoning adduced in his valuable paper, or the *post mortem* appearances upon which the distinction in question is founded; but I have no doubt that, in the future investigations of pathologists, it will meet with that attention which the interest of the subject demands.

Men of the first observation and experience have differed upon the question of absorption; and authors appear to me to have gone to opposite extremes, when they assert, either that recovery never, or that recovery not unfrequently, takes place after effusion has occurred. However hopeless, generally speaking, is the nature of hydrocephalus in an advanced stage, my own opinion is, that recoveries do sometimes happen. In explanation of this opinion, I beg leave to remark, (although in some cases death appears to take place from effusion, without disease being observed in the substance of the brain,) that, as the worst symptoms of hydrocephalus acutus have been witnessed in cases where little or no effusion of serum has been afterwards found in the ventricles, it seems a highly probable conclusion, that, generally, its fatality does not so much depend upon the collection of water, as upon the destruction or disorganization

of those vitally important parts, which late pathologists have shown to be the chief seat of that diseased action, of which effusion is only one of the consequences. In other words, that the issue here depends on whether this morbid condition has proceeded so far as (by the deposition of coagulable lymph, or alteration of the structure of the central parts of the brain) to be incompatible with life or not. In the latter case, the injury sustained is probably not greater than the powers of nature are capable of repairing; and in the process of reparation they may be aided by the co-operation of art. On this point, I speak with the diffidence belonging to limited experience; but my observation of the utility of this medicine, in occasional cases of oppressed brain supervening in fevers, after the abatement of increased heat and vascular action, leads me to agree with Dr John Clarke, (Diseases of Children, p. 179,) that in this stage "mercury appears to be the only remedy which has been successful in the cure of acute hydrocephalus;" and although my expectation of its curative influence in such cases is less sanguine than that which seems to have been entertained by this experienced practitioner, and some others, I am inclined to consider the following as an instance of this description. To this idea, however, I wish to attach no undue weight; it is a mere matter of opinion.

Clifton, March 1820.

Case.

Harriet Buckland, ætatis 17 months, on the 13th October 1818, was shown to me while asleep. Her mother said she had been very heavy lately, and frequently laid her head down. She had been ill about a fortnight. I considered it a case of infantile remittent: ordered a mercurial purge, with some senna tea, and advised a note of admission to the Dispensary to be procured. I heard no more of her until the 16th, when I was sent for, and found her alarmingly ill, convulsed, comatose, and with a very quick pulse. I directed leeches to be applied to the temples, and the following powders:

℞ Hyd. submur. gr. ij. P. jalapæ gr. v. Sach. gr. viii. M. habt. doses ii.; 1 sumend statim et repetr. h. s. Capt. etiam inf. sennæ ʒvi.; et repr. nisi prius respondeat alvus.

17th.—But three leeches were applied yesterday, and only two of them bled freely. The child lies in a state of coma, but cries out occasionally; the pupil is insensible to light; the pulse quick; the motions black and offensive. I think it here necessary to observe, that I wished to order the repetition of leeches; but in this, as in almost every subsequent part of the treatment, I was so much opposed by the grandmother, who was a strong advocate for leaving every thing to the will of Providence, that I was only induced by the pro-

mises and earnest entreaties of the child's mother to continue my attendance.

Repr. pulveres ex jalapa et calomel. No. iij ; Capt. 1 statim, et repetatur hora somni.

18th.—She has been frequently purged since yesterday. The motions are perfectly black, and so offensive as to taint the room for some time afterwards. The eye-lids are closed, reddish, and tumid ; on being raised, the eyes look suffused, inanimate, and watery, and the pupil is perfectly insensible to the stimulus of light. The child is very comatose, and frequently convulsed. The pulse is very quick.

Applicentur hirudines ij. sing. temporibus, et postea imponatur vesicatorium nuchæ. Nec non utatur balneo tepido et fomentationibus pro re nata.

R. Hydr. submur. gr. iij. P. jalap. gr. vi. M. habeat doses ij. Sumat. 1 statim et alteram hora somni.

19th.—Three dark and extremely fetid stools. Very restless in the night ; tossing about, moving her hand to her head, and frequently convulsed. The blister has not risen. She appears to be now completely comatose, and insensible. The pupil is dilated, and the pulse is very quick.

Repr. pulv. ex jalap. et hyd. sub. doses iij. ; 1 statim, et repr. 4ta hora, iterumque h. s. Foveantur abdomen et crura.

20th.—The mother sent up P. M. to say that the child was still worse ; and so strongly convulsed, at times, that she could hardly hold her. An enema, with castor oil and assafetida, was prescribed, but was not exhibited. The child is quieter and less insensible today. The blister has risen well at last. The bowels are very open, and the motions are still dark, but less fetid.

R. Hydrarg. submur. gr. xij. Sacchari ℈ij. M. divide in chartas vi. sumat unam sexta q. q. hora.

21st.—The child frequently opens her mouth very wide, as if yawning. This gaping motion has continued ever since yesterday, and alternates with a kind of mumbling or biting motion of the lips ; but she is not so comatose, more sensible of stimuli, and cries as if in pain when the head is moved or raised. The pulse, too, is rather less quick.

Contr. calomel 6ta q. q. hora ut heri præscript.

22d.—Notwithstanding the unfavourable state of things, as there was some slight appearance of amendment yesterday, I was induced again to recommend a trial of leeches, and obtained a promise that they should be applied ; but two only were tried, and I was told they would not fasten. To-day she seems in an almost hopeless state. She makes no movement of the left leg, which seems paralysed, but the right is frequently extended and retracted. She is constantly moving her head from side to side on the pillow, and biting and moving her lips, but with less frequent gaping than before.

Perstat in usu calomelanos gr. ij. 6ta q. q. hora.

23d.—She has had no convulsions since yesterday, and seems somewhat more sensible, and expresses pain when moved. She appears dimly to discover objects passed close before her eyes. The stools

are less dark and offensive, and now greenish, probably from the calomel. The pulse is still quiet.

℞ Ungt. hydrargyri ʒss. Inungr. ʒss. 6ta q. q. hora somni
Repr. pulveres.

24th.—The most decided opposition was made to the inunction, and I was obliged to give it up on condition that the powders should be punctually administered. The child appears more sensible to-day, and the pupil contracts a little on the approach of light. The pulse is still quick, though less so than it was. The bowels open.

Repr. pulveres ex calomelane.

25th.—The stools are become yellow, and the child is more sensible.

Repetantur pulveres mercuriales.

27th.—The evacuations are now yellow, and of a more natural appearance, but they are less free than they were. The child is sensible, and her cheeks are at present flushed with passion, from not obtaining something she wishes.

Repr. pulveres.

28th.—She can use the left leg now, as both are frequently retracted with a struggling kicking motion; but the left arm seems to be more helpless than the other. She frets and moans as if in pain.

Contr. calomelas u. a.

29th.—Her mother says she first observed her to look up, and to observe what was going on, yesterday. To-day both eyes are open, but they look dull and filmy, like those of a fish, though she winks when any thing is opposed to them. She has a tasting kind of motion of the lips, and uses both hands. Three yellow motions.

Repr. pulv. hyd. submur. No. vi. ut antea.

30th.—She is better in all respects.

Nunc sumat pulverem nocte et mane tantum. 1 vesic. contr.

Nov. 3d.—She was more feverish and peevish yesterday, and the motions greener and more offensive. She is now very cross and irritable.

Ommittr. pulveres. Capt. syr. papav. coch. parv. h. s.

℞ Pulv. jalapæ gr. vi. Hyd. sub. gr. ij. M. habt. ij. Capt. 1 mane.

5th.—The powder produced some blackish offensive matter, but the stools are now natural again, and the sensorial affection seems nearly gone.

Cras vel prostridie habeat pulv. cathartieum si opus sit.

10th.—The child has apparently quite recovered the use of her limbs, and is free from all sensorial symptoms.

30th.—Saw the child to-day, who appears almost quite recovered. She eats enormously.

Habt. pulv. purgant. No. iij. et capt. unum pro re nata.—*Discharged.*

26th Jan. 1819.—I observed the child to-day running about, and her mother says she continues quite well.

P. S.—Saw her several months after the last date in perfect health.

XII.

Cases of the Epidemic Cholera. Communicated by J. H. Walker, A. M. M. D. Late Surgeon of the 73d Highland Regiment. From the Correspondence of a Friend.

Inclosed I beg to forward a letter from a friend, a captain in his Majesty's 84th regiment, on which the greatest reliance may be placed, as Captain P. is a most intelligent and observing officer. I also send a case or two of the disease alluded to in his letter, which is the epidemic spasmodic cholera morbus, as it prevailed throughout the Continent of India.

Having obtained leave of absence from my regiment, stationed in the Island of Ceylon, for the purpose of exchanging on the half pay, I left that island, and touched at the Presidency of Madras, where I learned there were detachments of the 25th light dragoons, the 84th and 86th regiments, to proceed to England, and a medical officer was required; upon which I reported myself to Colonel Macgrigor Murray, Deputy Adjutant-General to his Majesty's Forces there, and tendered my services for that purpose. I was accordingly put in general orders for that duty, and joined the six companies of the 84th, (which lately arrived in the ship Alfred,) at the south beach of Madras. In consequence of the men being allowed, as is frequently the case on leaving India, to extend their services to regiments remaining, and receiving a bounty for it, there was much drunkenness and irregularity prevailing among them. Exposure to the scorching sun; the hot winds, as they term them, just setting in; the epidemic that had been at Madras before, made its appearance in my detachment; and a soldier of the 84th, who had concealed his complaint until the fatal symptom of cramp in the thighs and calves of the legs came on, was reported sick. He was conveyed to the general hospital, which is about half a mile or thereabouts from the encampment at the south beach. Every assistance from Mr Sargeant the assistant, and the surgeon to the establishment, was afforded, but the man fell a sacrifice to the disease, and his imprudence in concealing his complaint until so far advanced. This body was opened in the presence of the two medical gentlemen alluded to, *i. e.* Mr Ainsley the surgeon, Mr Sargeant the assistant-surgeon of the hospital, and Mr Forster and his assistant, of his Majesty's 46th. The intestines, which we first inspected, shewed evident signs of congestion; the colour of the

innumerable distended vessels was more of a brick-dust colour than florid. We all observed that his liver was unusually healthy-looking for an Indiaman. I understood that there were little or no marks of diseased appearance in the brain. I myself was under the necessity of leaving the body to attend at the beach, where some others were threatened with this disease.

I found, however, that when the men complained early, *i. e.* when the looseness first came on, with sickness at stomach, indeed, at any time before the cramps seized them, the chances for a recovery were more to be calculated upon; and there is no time whatever to be lost, but a practice as bold as the disease seems to be desperate, was absolutely required, to be of any chance in saving the patient. When I was acquainted with the sickness or complaint of a patient, I first bled him profusely in the horizontal posture; administered very large and often repeated doses of tinct. opii in brandy or arrack, which appears at first to be rather extraordinary practice, but which I found to succeed better than any other suggested; enemata were also administered, with their proportions of laudanum in them. When the vomiting and purging abated, the submur. hyd. was had recourse to, either with or without opium, at the discretion of the practitioner. When the cramps came on, I had reliefs of men to rub in stimulating embrocations with flannel or the like. I have little faith in the warm bath,—I think it is losing time,—and the application of heat any other way is better, say by a vapour bath, for I observe the patient always complains of being much colder when taken out of the warm bath, which is very natural, if the temperature is greater than that of his body,—and all that time, as I already observe, is lost, which we might employ in other exertions more calculated to relieve the sufferer. There is very little inclination to make water in the cases I have seen of the disease, and the evacuations by purging are of a watery nature, with small flocculi not unlike bits of chewed paper floating in them.

The first case I saw of this disease was that of the senior assistant of my regiment, at Trincomalee, immediately after my return from the province of Matele, (Kandyan territory,) where I had been for about three months with a detachment of the army sent there to subdue the rebel chiefs who had taken refuge in that part of the island. As soon as the vomitings and purging took place, he sent for me, and I made a free use of my lancet, which cut short the disease: he did well. The second case was that of a lieutenant of the same regiment, (78d,) who had been a long time poorly with a hepatirrhœa, and was on his way home on sick leave. He was not my patient,

although I had an opportunity of frequently seeing him. The symptoms of the epidemic spasmodic cholera came on him about 10 o'clock, and he died that day, notwithstanding every exertion was used by Mr P., the surgeon of his Majesty's 19th regiment, whose patient he was. This was not a fair case for the active treatment; the patient was much emaciated, and Mr P. could not use the lancet, but was obliged to trust to internal medicines, with vapour-bath, alone.

One of the cases transmitted herewith, the dragoon's, happened at sea. I do not recollect rightly, but I think we had crossed the equator southerly on our way home. I saw him as soon as he was taken ill, my cabin being next the sick-bay, and the plan stated was adopted, which effected a speedy cure. I must confess I was a little alarmed at the appearance of vomiting and purging in two or three others at the same time, and imputed it afterwards to some other cause; but the dragoon's case was a true one, putting on the alarming and most frequently fatal symptom of cramps. It is to be lamented, that the superstition which prevails among the several casts in the East prevents them taking any medicine, or putting much faith in us; as many suffer throughout the East from their apathy, added to their apparent contempt of death. Some of these poor creatures have been known, when sick, to go to some corner and cover themselves up in their cowleys, and die with more indifference than any of us would go to rest at bed-time. I should be led to think, from the only case I saw opened, that there was an evident determination of blood to the intestines, particularly the small ones; they appeared beautifully injected, but not florid. I should imagine, from the nature of the discharge by stool, that there was some defect in the secretion of bile; for it does not appear to be admixed either with the stools or the contents ejected from the stomach. I have been told, prior to my leaving the Island of Ceylon, that one of the medical gentlemen of the 83d, who had inspected many bodies that died of this disease, is writing on the subject. He seems to think that the heart puts on a morbid appearance, and that there is an atony of some part of this viscus to be detected; however, I am not sufficiently informed, from the few bodies I have seen opened of such as have died of this disease, to say any thing further on this subject.

London, 7, Palace Street, Pimlico.

Ship Alfred, at Sea, 27th October 1819.

DEAR WALKER,—According to my promise to give you the substance of my remarks on that horrible disorder, the Spasmo-

dic Cholera, which prevailed in several parts of India, and was attended with such fatal effects, I now shall do so, as well as my recollection at this moment enables me to do.

About the month of July or August last year, accounts reached us of a dreadful disorder which had made its appearance amongst the army stationed in the northern provinces of Bengal, and had carried off several, both Europeans and natives. Various opinions were formed of the cause, but none that were considered as entitled to weight, some attributing it to new rice, fish, &c. The attention of all medical men was engaged in endeavouring to ascertain the cause, and the treatment most likely to avert the fatal effects. All ranks of men, young and old, those who lived abstemiously, as well as those of irregular and intemperate habits, equally fell victims to it; but it was remarked that women and children were less frequently and less severely afflicted by it, although there were instances of it in the 84th regiment.

As far as my observation enabled me to judge, it appeared to me that those who lived intemperately, ate of fish and vegetables not sufficiently boiled, and were exposed to the noon-day sun, and the dews and cold of the nights, were more severely attacked. The symptoms observed were pain in the head, sickness in the stomach, vomiting and purging, and a great thirst, with cramps and spasms. It may be well to remark, that the disorder was observed to make its appearance about the full of the moon; it was not unusual for people to be affected two or three times. No particular part of the country appeared to be exempt from it, if we may judge from the course it took in the progress through the country, viz. from the northern provinces of Bengal, in a direction south to Calcutta, where several thousands died of it, to the northern Circars, as far as Masulipatam and its neighbourhood; from thence across the Peninsula to Bombay; from thence it took its course in a southern direction, along the west coast to Quilon and Travancore.

In the month of August its effects were felt in the division of the army stationed in the neighbourhood of the Kisnah river, under the command of Brigadier-General Pritzler, and soon after at *Bellany*, where the 84th was stationed,—a country fertile and healthy, without any rivers of note, but generally dry, except in the rainy or monsoon time. From Bellany it took its course south, and about half way divided towards *Mysoor* and *Madras;* at the former place several died, but at the latter, from medical aid being easily had, its effects were not so much felt.

In the month of May 1819, towards the end of the month,

a detachment of the 84th regiment and 25th Light Dragoons, under my command, encamped on the south beach Madras, close to sea, when, almost immediately, this horrible disorder, with all its fatal effects, made its appearance, and carried off some of our best men. I should here remark, that our men had been indulging freely in liquor for some time previous, and that they exposed themselves much to the sun by day, and the nights were remarkably cold. Bleeding freely, with stimulants applied to the limbs and body, calomel and laudanum in large doses, were found the best remedies.

These, as well as I now can recollect, are the points regarding this dreadful disorder, which most forcibly attracted my notice. I regret that I have not an opportunity of perusing my note-book, which contains some remarks which might be useful; but the Madras and Bombay newspapers, which may be seen at the Jerusalem Coffeehouse, I think may furnish much useful information on the subject. Your's very sincerely,

S. P.

To Dr Harding Walker, 73d Regiment.

Private James Lynch, of his Majesty's 84th regiment, aged 28, (cholera morbus,) admitted into the hospital on the 23d May 1818, at a quarter past 5, P. M. Says he was seized with a vomiting and purging about three hours ago.

At 6, P. M.—Was bled by having three veins opened; blood did not flow freely, and was of a thick consistence; lost about ℥xii. only. Took 60 gt. tinct. opii in brandy and æther; 40 gt. repeated fifteen or twenty minutes after; frictions to the limbs with flannel. Warm-bath, injection, warm brandy and water, &c. were all tried without effect. Sinapisms were also applied to both legs, but the patient died at half past eight o'clock the same evening.

Appearances on dissection.—Monday, 24th May 1819.—This is the case of the patient alluded to in my letter, whom I mentioned was opened at the general hospital by Mr Ainsley, Mr Sargeant, and in the presence of Mr Forster, his assistant, of the 46th, and myself.

Colour-Serjeant Jonathan Holmes, ætat. 31, his Majesty's 84th regiment, complains at 3, A. M., 26th May 1819, of having had a purging all night, and was then seized with a vomiting.

4, A. M.—A violent griping, accompanied with vomiting and purging. ℞ Cal. gr. x. Tinct. opii gt. lxx.

Half past 4.—Griping continues. ℞ Tinct. opii gt. l. Arrack ℥ij. M.

Bled by having two veins opened; lost ℥xii. of blood, which did not flow freely.

5, A. M.—He is seized with spasms in his legs. Fric. cum. flor. sinap. ℞ tinct. opii, gt. xl. Arrack ℥iii.

The spasms rapidly increasing; in about five minutes after, ℞ Tinct. opii gt. c. Arrack ℥iii. M.

Half past 5.—Spasms continue. ℞ Tinct. opii gt. c. Arrack ℥iii. M. Frictions continued.

Three-quarters past 5.—℞ Tinct. opii gt. l. Arrack ℥iij. M. Habt. enema anod.

7, A. M.—Has dozed in sleep for upwards of an hour; awakes with a return of vomiting and spasms, and complains of a violent pain in the small of his back. ℞ Tinct. opii gt. c. Arrack ℥iij. M. Repet. enem. anod.

Half past 7, A. M.—Is very restless; has had no sleep since 7. Eyes heavy. Expresses a wish of his effects to be given to his children and native woman. ℞ Tinct. opii gt. l. Rum ℥iij. M.

He commences breathing very heavy: his eyes are fixed, and at a quarter before 8, A. M., expires.

N. B.—This man was taken ill the forenoon of the night I saw him, being called out of my tent at 12 o'clock to see him, and found him violently purged, vomited, and cramped all over; he would not bleed, and nothing remained on his stomach. He died as is above stated. He was, I believe, opened at the General Hospital. Had I seen the patient when he first complained, the plan of treatment adopted might have succeeded, as I see no reason for its exception in one case more than the other, in men of constitutions capable of being treated thus. It succeeded in every case I was called to in due time. Two officers were the subjects which did well, and many of the men. I have only given the fatal cases, being those I have kept particularly.

Serjeant JOHN WHITEHEAD, his Majesty's 84th regiment, æt. 39, at 12 o'clock, 31st May 1819, (on board the ship Alfred, at anchor in the Madras Roads,) complains of a pain in his limbs, a vomiting, and cold sweats.

31st May 1819.—Was bled, and lost ℥xxx. blood.

At noon.—℞ Tinct. opii gt. c. Brandy, ℥iii.

2 P. M.—Complains of the pains in his limbs being worse, and much wind on his stomach. R. Spt. æther ℥ij. Tinct opii. gt. lxxx. M.

Half past 2.—R. Tinct. opii gt. xxx. Brandy, ℥iij. M.

3 o'clock, P. M.—So much easier. R. Tinct. opii gt. lx. Brandy, ℥iiij. M.

9 P. M.—℞ Tinct. opii gt. c. Arrack, ℥iij. M.

10 P. M.—The spasms attack him. Lost about ℥xxx. blood from the vein formerly opened.

1st June, 1, A. M.—The spasms reattack him. ℞ Tinct. opii gt. l. Arrack, ℥iij. M.

3, A. M.—The spasms attack him again, with vomiting. ℞ Tinct. opii gt. c. Sp. æther nitros. gt. l. Arrack ℥iij. M.

9.—Much better; has slept a little time back. ℞ Arrack ℥iij. cum Sulph. acid. et aqua. Cal. gr. v.

Noon, quarter less 1.—The cramp reseizes him in his hands. ℞ Arrack ℥iij. Tinct. opii gt. lv. M. Discontinue sulph. acid. ℞ Cal. gr. vi.

Half past 3, P. M.—The cramp revisits him. R. Spt. æther nitros. ʒiij. Arrack ℥iij. M.

9 P. M.—He is again seized with the spasms, and a purging. R. Spt. æther nitros. ʒij. Arrack ℥iij. M.

10 P. M.—Much better; no medicine.

June 2d, 7 A. M.—No symptoms of cramp or vomiting; no medicine.

June 3d.—Much better; bowels open; no medicine.

9th.—Discharged.

Richard Tackley, private in his Majesty's 25th Light Dragoons, ætat. 25, is brought to the sick bay on board the ship Alfred, in lat. S. 20° 50' at 9 A. M. 9th July 1819, with a violent pain at his stomach, a purging, and a great inclination to vomit.

9 A. M.—R. Cal. gr. iij. Jalap. gr. xv. M. Thermometer 72.

Half past 9.—He is seized with spasms in his legs and arms, is fainty and eyes very heavy. Mitt. sang. ad. ℥xxx. R. Tinct. opii gt. c. Arrack ℥iij. M. Glyster tinct. opii gt. cc. Ap. friction of camphor and spirits, with liq. ammon. to the limbs affected.

Three quarters past 9.—The spasms return. Frictions as before. R. Tinct. opii gt. c.

10 A. M.—Feels sleepy; a vomiting seizes him. R. Tinct. opii gt. l. Arrack ℥ iij.

Quarter past 10.—Pulse quick, and cold sweats; inclinable to sleep.

Half past 10.—Goes to sleep.

Three quarters past 10.—Awakes; much thirst. R. Arrack ℥ij.

12th.—Feels much better; no spasms; much thirst. R. Cal. gr. iij. Jalap. xv. M. He goes to sleep.

2 P. M.—Wakes and feels much better.

4 P. M.—A vomiting returns, with uneasiness at his stomach. Ap. emp. lyt. part. affect. dolor.

10th, Ther. 69, 8 A. M.—Has had a good night's rest; has had no stool during the night. R. Cal. gr. iij. Jalap. gr. xv. M.

11th, Ther. 69.—No pain; is costive. R. Cal. pil. gr. v. Bowels moved.

12th, Ther. 73.—Discontinue medicine.

13th, Ther. 72.—Discharged.

PART II.

CRITICAL ANALYSIS.

I.

Medical Notes on Climate, Diseases, Hospitals, and Medical Schools, in France, Italy, and Switzerland; comprising an Inquiry into the Effects of a Residence in the South of Europe, in Cases of Pulmonary Consumption, and Illustrating the Present State of Medicine in those Countries. By JAMES CLARK, M.D. 8vo. Pp. 249. London, 1820.

THIS book must not be confounded with one bearing nearly the same title, which formed the subject of an article in our January number. Except in the title-page there is little similiarity. Much of very important matter will be found in the publication now before us; interesting both to the medical and the general reader, as well as to all those whose patients or friends may be about to be hurried away from their native homes to breathe out their expiring sighs at a distance from their relatives,—and, we may add, from their physicians also. As we entered so fully into the subject of foreign hospitals while examining Dr Carter's publication, we shall, in the present article, confine ourselves chiefly to Climate and Diseases, subjects upon which the reader will find more satisfactory notices than, from the author's unpretending preface, he could be led to expect. Marseilles, Hieres, Nice, Lausanne, and Rome, are the only places upon which Dr Clark considers himself fully authorized to deliver a decided opinion, from personal observation made during a residence of some considerable duration; and from these heads we shall endeavour to lay before our readers the most valuable matter.

There is internal evidence in Dr Clark's book that he observed with accuracy, and recorded his observations upon the spot. Some one, whose name we do not immediately recollect, has observed that notes of this description are worth "a cart-load of recollections." And a writer, whom no Scotchman can forget, and of whose ponderous style no reader can be ignorant, has thus happily explained the cause of this superiority: "He who has not made the experiment, or who is not accustomed to require rigorous accuracy from himself, will scarcely believe how much a few hours take from the certainty of knowledge and distinctness of imagery; how the succession of objects will be broken, how separate parts will be confused, and how many particular features and discriminations will be compressed and conglobated into one gross and general idea." *

Marseilles is a large and handsome city, of about 100,000 inhabitants, behind which, at the distance of some miles, rises a ridge of lofty mountains, extremely rugged and barren, forming a semicircular sweep around the town, which they encompass on all sides, except towards the north-west or to sea-ward. The roads from the town to the mountains are narrow and dusty, and inclosed by high walls, so that the invalid has no *country* about Marseilles; but the greatest annoyance is the frequency and force of the dry cold northerly winds of winter, especially of the *mistral*, or north-west, which frequently blows for several days together, and produces a great and very sudden alteration of temperature, rendered particularly sensible by the preceding heats, and which cannot be guarded against by the most cautious invalid. Dr Clark remarks upon the incorrectness of the test of the character of a climate which is furnished by the indications of the thermometer, and he illustrates the remark as follows:

"On the 24th of November, the mistral blew with considerable violence, and, to the feelings, was extremely cold; yet the thermometer, which the day before at 2 P. M. had stood at 55°, at this same hour on this day, had only sunk to 46°,—an effect on the thermometer certainly by no means equivalent to that produced on the living body. During the prevalence of this wind, which is generally accompanied with a clear cloudless atmosphere, the sun is often very powerful; and, exposed to it, in a sheltered situation, the invalid may enjoy a very high temperature; but this only makes him feel, with greater severity, the chilling blast, the moment he leaves this sort of artificial climate.

"From this account of the climate of Marseilles, we might, per-

* Journey to the Western Islands.

hope, not satisfied as to the effects to be expected from it in pulmonary consumption; but I shall adduce evidence still more positive, and which, I think, will set at rest for ever the question of the eligibility of this place as a residence for the consumptive. In the Annual Report of the Diseases of Marseilles, read before the Royal Medical Society of that place, in 1816, by Dr Segaud the secretary, are the following remarks, which I translate from the original:—

"The natives of the country, as well as strangers coming to reside here, who have *well-formed chests*, and who live temperately, attain to a great age. The most frequent endemial diseases are Phthisis Pulmonalis, Eruptions, Scirrhus Uteri, &c. The first of these, (Phthisis Pulmonalis,) which is often hereditary, and sometimes acquired through the little care taken to avoid the causes which give rise to it, produces inconceivable ravages among the younger part of the population."

"From the same physician, who kindly gave me written answers to my different queries on the climate and diseases of Marseilles, I chiefly obtained the following additional information:—The general character of the climate of Marseilles is dry and variable, and, as we have just seen, destructive to patients affected with consumption. It is, indeed, one of the towns of France, in which this disease is the most prevalent. Females from 14 to 18 years of age are its most frequent victims. In some cases it runs its course with great rapidity; in others the patient lives six, eight, and even twelve months, and, in a small proportion of cases, lingers for years. It attacks most frequently during autumn and winter. Dr S. believes it invariably fatal. Scrofula, attacking external parts of the body, is a rare disease at Marseilles. Pleurisy and catarrh are very frequent. Cancer and cutaneous diseases are common. Diseases requiring a dry climate, and not injured by keen cold winds, may expect to derive benefit from a residence at Marseilles. In the cure of intermittent fevers I was informed it is particularly favourable; cases which, in other places, had resisted the use of every remedy, getting well here without the use of any medicine.

"The above evidence on the climate of Marseilles, I think, will be considered conclusive. The part of the town most sheltered from the mistral is the northern side of the harbour. Here, or perhaps in some of the country houses, could one be found with the ground rising to the northward of it, a consumptive patient, under the necessity of passing the winter at this place, would find the greatest safety. Those who can choose their climate should not be found at Marseilles after the month of October." Pp. 12—16.

Hieres is a small ill-built town, twelve miles from Toulon, and about two from the shores of the Mediterranean. Much of the adjacent grounds are marshy, and productive of remittent fever in the summer months. The town is protected from the north winds by the hills which rise behind it, but it is exposed to the winds from the east, from the west, and even from the north-

west. The adjacent country is beautiful, well cultivated, and abounds in aromatic plants, several of which bloom in December; but the dreaded *mistral* is of frequent occurrence, and the climate is more humid than that of Marseilles.

"It is true," says Dr Clark, "that about the bases of the hills, there are some spots sheltered from the blasts of the mistral, where the invalid might enjoy several hours in the open air almost every dry day; but the difficulty is to reach them at the time that they would be most useful. The chilly blast, sweeping round every exposed corner, forbids the valetudinarian venturing there, except in a close carriage; while, on the other hand, the roads leading to these places do not admit wheeled carriages. The mule with its panniers forms the only means of transport in this neighbourhood, and by these the various offices of husbandry are performed, that in most other places are done by carts or waggons.

"On referring to the journal of my residence in Hieres, I find that from the 8th to the 31st of December inclusive, there were four whole days of continued rain, and three days of partial rain; two chilly overcast days, with a north-easterly wind; and nine days, during which the wind was steadily at the north-west, accompanied with a clear dry atmosphere. The medium temperature in the shade, at 2 P. M. during this time, was 50°. A few hours on the 26th, when the weather was calm, was the only time during the above period, in which that class of consumptive invalids generally sent abroad, could have been out with advantage, or, I may even say, with safety.

"During the first seven days of January, the weather was overcast, damp, and chilly, accompanied with an easterly wind; from the 17th to the 23d, it was clear, mild, and pleasant, from there being little wind. The medium temperature in the shade at 2 P. M. was 53°. During this month, there were altogether eighteen days in which the invalid might have enjoyed several hours' exercise in the middle of the day. During the last days of this month, and the beginning of February, the weather was cold and stormy." Pp. 21—23.

Dr Clark, upon the whole, gives a decided preference to Hieres over Marseilles.

Nice was first particularly recommended as a residence for invalids, by the late Dr Smollet, in his Travels in France and Italy; but later observers have by no means confirmed his favourable reports.

A thesis, of which Dr Clark speaks very highly, and in the praise of which we willingly concur, was published at this university in 1817, by Dr Samuel Sinclair, a surgeon in the royal navy, in which the author, from the experience of several years' service with the Mediterranean fleet, deprecates the practice of sending consumptive patients to the south of France,—a climate which he asserts is particularly hostile to, and productive of,

pulmonary consumption. From the official statements produced by Dr S. it appears, that during the years 1810-11-12, there were admitted into the naval hospitals of the Mediterranean, 455 cases of phthisis pulmonalis, and 140 of pneumonia, from a force of about 30,000 men, giving a proportion of 1 in 65 phthisical cases, or 1 in 50 of pulmonic diseases generally. To the singularly variable and uncertain nature of the climate, Dr Sinclair principally attributes this extraordinary prevalence of pulmonary disease; the peculiarities of the mode of life of seamen must also doubtless have had their share. Many of the invalids recovered their health by being sent home as soon as attacked, without waiting for the formalities required on other occasions. The nature of the attack, as described by him, appears to have been of the apostematous species of Dr Duncan senior. To the evidence produced in this tract of Dr Sinclair's, Dr Clark adds some very valuable remarks from an unpublished work of Professor Foderé's, in confirmation of his opinion, that a change to the climate of Nice is *useless in any stage of the complaint*, and worse than useless in the latter stage of pulmonary consumption. The extracts are translated literally, and we here transcribe them, first giving our full assent to the professor's oral remark, "that it is a very bad practice in the English physicians, to send their consumptive patients to die at Nice."

"I come at length," he says, "to that terrible disease which carries off annually the tenth part of the inhabitants of Europe and North America—*pulmonary consumption.* Since we have shown that scrofulous affections are by no means rare among the Maritime Alps, it will naturally be expected that this other malady is also found; and accordingly I have to remark, that pectoral affections are common at Nice, Villa Franca, and along the whole coast where scrofula prevails. I have always been astonished that our older physicians should have sent their consumptive patients to our sea-shores; since it seems irrefragably proved by the experience of our time, that the climate of the shores of the Mediterranean is hurtful to such invalids. "I had seen a great number of these cases terminate fatally at Marseilles, and, at that time, I considered the very dry and keen winds of that place as the principal source of evil; but I afterwards found that the warmer, softer, and more humid atmosphere of Nice, was in no respect more favourable to such complaints. Every case of hereditary tubercular phthisis proves fatal, as well at Nice as at Villa Franca, in very early age. In these places consumption is not, as in Switzerland, on the Banks of the Seine, and in Alsace, a chronic disease; on the contrary, I have very often seen it terminate in forty days. A physician of the countries just mentioned would be surprised at the quickness with which one attack of hæmoptysis

succeeds another, how readily the tubercles suppurate, and how speedily the lungs are destroyed. The English annually make fresh experience of this melancholy fact, and their burying ground in the *Croix de Marbre* too well testifies its truth.

"In considering what may be the causes of this uncommon frequency and fatality of consumption in this country, many are disposed to lay much stress on the sudden variations of its climate. But, let me ask, in what countries are not such variations found? And in what book of medicine are they not accused as the manifold source of diseases? And yet the rapid career of consumption, which we have just noticed, is very uncommon in most other countries, even in such as are cold and moist. In these, the disease, although without offering any solid hopes of a cure, gives, nevertheless, a long truce to its victims. From this it would appear that there must be on the shores of the Mediterranean some other source of evil beside mere variability of climate; and I am disposed to look for this in the impregnation of its atmosphere with some of the muriatic salts of the neighbouring ocean.

"Upon the whole, I consider it as contrary to observation and experience, to send patients affected with tubercular phthisis to the sea-coast. And yet it is singular that the practice should continue to be persisted in. If ever a cure of the disease has been obtained by such a measure, of which I much doubt, it must, I conceive, have been in cases of spurious or mucous consumptions only." In another place Professor Foderé has the following remark: "I have observed that there is a tendency in the diseases of these places to attack the organs of respiration; and this is proved, independently of the symptoms during life, by examinations after death, which prove the lungs to be much more frequently gorged with blood and indurated (hepatisés) than in other countries.

"He observes, also, that persons predisposed to phthisical complaints do not die in summer, but in the autumn, when the mornings and evenings begin to get cold, and augment the congestion of the lungs by checking the perspiration." pp. 48—50.

Lausanne lies high, but it is exposed to the "bize," a cold dry north-east wind, which is frequently felt with much severity, especially in the evenings; but by proper attention, situations may be found where the inconvenience is not seriously felt. The most favourable situations are in the low grounds, near the margin of the lake; and although the heat is frequently inconvenient there during the forenoon, yet upon the whole it is the best residence for invalids, and the most effectually sheltered from the *bize*. The best time for the arrival of the invalid in Switzerland is about the middle of June, and he should leave it towards the end of September.

The climate of Rome is the last in which we shall accompany Dr Clark.

"From what I have seen," he remarks, "of the climate of this city,

I am strongly inclined to think it a preferable situation, for the generality of consumptive patients, to those which are more generally recommended. The air has a softness that I never felt in the south of France, or at Nice; and by those who believe such an atmosphere favourable in cases of pulmonary consumption, and prefer a situation removed some distance from the sea, Rome must have the preference.

"The *Tramontana* is frequently felt at Rome with considerable severity, and during the winter the climate is, without doubt, colder than that of Nice.

"It is chiefly during the spring months, it appears to me, that Rome has the advantage in point of climate, being less liable to the keen cutting winds of the places I have already noticed. This is, however, an important circumstance, as the great difficulty is to find a good spring climate, for the consumptive patient; the cold winds, which that season is liable to, I believe over the whole of Europe, being the evil most to be dreaded. At Naples they are particularly complained of. In truth, I believe no place is exempt from them; nor must I be understood as stating Rome to be so; all I wish to be understood is, that Rome is less liable to these winds than most places I have seen.

"I met with a few cases at Rome rather favourable to the opinion I have ventured to give of it in consumptive cases. One gentleman, labouring under an affection of the lungs which rendered him very liable to attacks of inflammation in these organs, and who had several other symptoms, shewing, at least, a strong tendency to Phthisis, went to Naples during the winter with the intention of stopping there some time; but very soon after his arrival he was attacked with Hæmoptysis, and obliged to return to Rome, where he always feels comfortable.

"Another gentleman, whose mother died of an affection of the lungs, and who himself had suffered long from Hæmoptysis followed by cough, copious expectoration, &c., found much benefit during a winter's residence at Rome,—his cough, pain of chest, &c. having left him, and he gained strength. In March he went to Naples, when his symptoms soon began to return; the cough and pain of chest became troublesome, and he felt a general irritability which prevented him from sleeping. He remained a month at Naples, and then returned to Rome, where these unpleasant symptoms very soon disappeared. This case was related to me by the gentleman himself, who, from having been long an invalid, had, from necessity, paid particular attention to his symptoms, and the effects of climate upon them.

"A lady, who had lost several of her family from consumption, who was subject to occasional cough, with an increased secretion from the bronchia, at times tinged with blood, and was a good deal emaciated, got rid of all her unpleasant symptoms during her residence at Rome, and even gained strength and flesh. This lady had lost ground during the preceding winter at Nice, and was one of those I alluded to as having been attacked with Hæmoptysis in the spring.

"These few cases appear to me worthy of remark; they afford but a slender evidence, it is true, in favour of Rome, but they do afford

some, and of that kind, too, which we want most; and I doubt much, whether the whole of the climates recommended to, and frequented by, our consumptive patients, in the south of France and Italy, could bring forward as much in the same space of time.

"Should these observations ever be the means of inducing a consumptive patient to go to Rome, I must caution him to consider himself strictly as an invalid, otherwise Rome is a dangerous residence. He must not imagine that he can enter with impunity into those amusements, from which he was prohibited at home. The houses of Rome are not well calculated for gaiety during winter; and, indeed, the same remark is generally applicable to the houses all over Italy. The staircases and lobbies are large and open, and subject to currents of air, of which invalids not unfrequently feel the effects.

"Many of the streets in Rome, too, are damp and chilly, and the alternation between these shaded streets, and situations exposed to the sun, is often very great. On this account the open carriages, so much in use at Rome, are very dangerous to the delicate, and close carriages should be alone used during the winter. Neither must the invalid pass his time among the ruins of the ancient city, nor the churches of the modern, both of which are frequently damp, and always cold, until the season is so far advanced as to make them safe for him. Ladies, in particular, visiting these churches, should be careful to protect themselves, by warm thick shoes, from the extreme coldness of the marble floors.

"In these remarks on the churches I do not include St Peter's. From the immense body of air which it contains, it is always of a mild temperature, and always safe for the invalid. On examining its temperature by the thermometer in January, I found it exactly 60°, (when the external air at 2 P. M. varied from 50° to 55°,) which I imagine is very near the medium annual temperature of Rome. It is commonly said that St Peter's is hot in winter, and cold in summer; the truth is, the temperature of St Peter's remains unchanged, and it is the variations of the external air, and of our sensations at these seasons, that give rise to the deception. During rainy weather when my patients were deprived of exercise, I not unfrequently recommended a visit to this magnificent structure, where they found both occupation for the mind, and a mild temperature to take exercise in.

"By attention to these hints, I am inclined to think the consumptive patient may pass the winter at Rome fully as well as at any other part of Italy, and perhaps better. The best residence is somewhere about the Piazza di Spagna, which is well sheltered, and has the advantage of being close to the Pincian Mount, which affords the best protected and most delightful walk at Rome. The Via Babuina is a bad situation.

"It is almost unnecessary to mention, that accommodations are good and abundant in Rome. The provisions in general are also very good; and the fountains are not more famed for their beauty, than estimable for the abundance and purity of their water, which is always from a great distance." pp. 71—76.

We cannot conclude our account of this little volume without giving our testimony to the clearness and perspicuity with which it is written, and the judgment which is displayed in separating it into parts. Of the first division we have given such an analysis as our limits would admit, and which we hope may induce both the consumptive invalid and the physician, who contemplate a removal to the southern parts of Europe, to examine the work more closely for themselves. The second part contains notes on the present state of medicine and medical practice in some of the schools and hospitals of France and Italy, into an examination of which we shall not at present enter.

II. III.

I. *The Army Medical Officer's Manual upon Active Service; or, Precepts for his Guidance in the various Situations in which he may be placed; with Observations on the Preservation of the Health of Armies upon Foreign Service.* By J. G. V. Millingen, M. D. &c. &c. 8vo, pp. 267. London, 1819.

II. *Practical Observations on the Means of Preserving the Health of Soldiers in Camp and in Quarters; with Notes on the Medical Treatment of several of the most important Diseases which were found to prevail in the British Army during the late War.* By Edward Thornhill Luscombe, M. D. &c. &c. 8vo, pp. 132. Edinburgh, 1820.

Contributions to medical science are now daily accumulating from the pens of officers who accompanied our armies during the late campaigns; and although the works before us are more peculiarly interesting to that class of practitioners, much important matter will be found in them, worthy the perusal of the members of the profession at large. To the philosopher these, and similar works of recent date, furnish much matter for serious contemplation, and for congratulation also,—for they prove, that, if war has its curses, it is not altogether unproductive of benefits. The time was when our fleets and our armies went forth to battle with a most scanty provision

against accident or disease. "I remember," says Gale, "when I was in the wars at Muttrel, in the time of that most famous prince, King Henry VIII., there was a great rabblement there that took upon them to be surgeons. Some were sow-gelders, and some horse-gelders, with tinkers and cobblers. This noble sect did such great cures, that they got themselves a perpetual name; for, like as Thessalus's sect were called Thessalians, so were this noble rabblement for their cures called dog-leeches; for, in two dressings, they did commonly make their cures whole and sound for ever, so that they neither felt heat, nor cold, nor no manner of pain after." Even in our own days, a cannonball was pronounced by Suwarrow to be the "sovereignest thing on earth" for all sorts of military accidents; and we doubt not that it was in many cases a much more humane mode of treatment than that which emanated from the specious but absurd attempt of the Prussian monarch, to model the laws of nature by military authority, and to regulate the operations of the surgeons of his army by an order of the day. To the military officer these works will be found of importance, particularly to those in whose department lies the planning of expeditions, and in whom it is not only necessary to order "physic enough for forty thousand men," but also

> ——— "fit they know
> Something about the place to which they go."

Both Dr Millingen and Dr Luscombe write from extensive experience. The former officer states, that he was present at twelve general engagements, and fourteen partial actions, during the period of upwards of eighteen years, in which he had served at the date of his publication; and Dr Luscombe had served sixteen years, when he took out his degree at this University, and published the Thesis, of which his present work may be considered as an amplification.

There is great good sense displayed in the following passage from Dr Millingen's book; and the suggestions contained in it are well worthy the attention of all medical travellers, whether in military or civil life.

"No time should be lost on the arrival of an army in a foreign country, more particularly when intended for extensive operations, in assembling a board of health, presided by the inspector-general; in which the following points will be investigated, and official and detailed reports thereon, subsequently submitted to the commander-in-chief.

"1*st*. What are the usual epidemic, endemic, and sporadic diseases of the country? at what period of the year making their appearance? whether general, or only prevailing in particular districts?

"*2d.* If general, in what season? under the prevalence of what wind? in what situations?

"*3d.* Provincial, where? what are the supposed causes? on the banks of what river? in the vicinity of what lake, morass, wood, &c.? under the use of what particular diet or article of food? the medical topography of the district to be minutely ascertained.

"*4th.* What is the most approved practice of the native medical men? and what are the prophylactic means generally resorted to by the inhabitants?

"*5th.* What is the nature of the water of the several rivers?

"*6th.* What are the principal mineral springs and thermal waters? obtaining if possible their analysis.

"*7th.* What are the most approved works upon the medical topography, and the diseases of the country, as well as on its natural productions?

"*8th.* What are the prevalent winds at the different periods of the year? and what is the mean temperature of the different provinces during the various seasons?

"*9th.* What is the habitual diet and mode of living of the inhabitants? in the middling and labouring classes more particularly—inquiring into the diversity of provincial customs, which can generally be traced to prophylactic motives.

"*10th.* What are the indigenous alimentary, medicinal, and poisonous productions?

"*11th.* What are the condiments most commonly made use of?

"*12th.* What are the means usually resorted to by venders of wine, spirits, beer, &c. to adulterate these articles, and what are the most effectual and ready tests for detecting the fraud?

"*13th.* What are the principal diseases of cattle?

"*14th.* What are the venomous reptiles and insects, and what are the popular means employed to counteract their bite or sting?

"*15th.* Of what description are the means of transport in the several districts, whether by land or water carriage?

"*16th.* By land; of what kinds the waggons, carts, &c. or bat animals—of what description the roads? By water; of what size the boats, whether open or decked, and how far navigable the rivers, lakes, or canals?

"*17th.* The adopted codex or pharmacopœia of the country should be examined, that the different preparations found in apothecaries' shops may be known, and the weights and measures reduced to the British scale.

"*18th.* What are the names of the most distinguished medical practitioners in each province and principal town?

"*19th.* What are the principal public hospitals and infirmaries in the several cities, towns, and districts, whether supported by the nation, or by private endowments?

"*20th.* What are the principal monasteries, seminaries, colleges, &c. in the several districts, and which of them belong to the wealthiest orders?

"*21st.* What are the principal palaces, country seats, and manufactures, in the neighbourhood of the cities and towns lying in the probable theatre of war?

"*22d.* How is the country supplied with salt? where abundant, and where scarce? whether sea salt or rock salt?" pp. 52—55.

Dr Millingen, like every other well-informed medical officer, approves of the smaller regimental, rather than of the larger general hospitals, "those sinks of human life," as they have been appropriately designated by Dr Rush. And he takes occasion to mention, that to Mr Knight, the late Inspector-General of Regimental Hospitals, the nation is principally indebted for the organization and efficiency of these most important establishments, which not only afford comfort to the sick soldiers, but preserve many thousands in the ranks upon active service.

There is a considerable degree of knowledge of human character displayed in a note at p. 182.

"I cannot refrain from giving it as my opinion, that medical officers should, as seldom as possible, bring men to punishment or confine them: although it is true, that it is their duty to assist in maintaining discipline, yet they are not the active instruments of its preservation out of hospital; a medical officer who aims at the character of a *Martinet*, not only loses the confidence and affection of the men, but becomes an object of ridicule to the officers."

This robbery of the provost and the drill-serjeant of their privileges, reminds us of an anecdote, told, we believe, of some Prussian Æsculapius, who had the most necessary utensils piled, in various military figures, throughout the wards of his hospital, but, like the guinea in the possession of the worthy Vicar of Wakefield's daughters, "with strict injunctions never to use them."

Dr Millingen has adopted a plan at the end of his work, which we wish to see generally followed, and of which we have expressed a favourable opinion, on more occasions than one, in this Journal, viz. giving a bibliographical list of the principal writers who have treated on the subject of his work. This directs the attention to the most important books, and often enables a physician to pick up, at a small rate, both at home and in foreign countries, works connected with his profession, which he would otherwise never have thought of, but, from a perusal of which, great information may be occasionally derived. We have observed, in Dr Millingen's catalogue, a few tracts, which possibly never have gone beyond the shelves of our own, or some foreign University, having been published as Inaugural Dissertations; still, however, it is proper to include them along with others more generally accessible. The printer, by the

substitution of a letter, occasioned us no small share of trouble in looking over our catalogues, having, by his error, nearly converted an Italian professor into a British bumpkin. In the next edition this should be corrected, and "Maggins" should be read "Maggius." There are a few other misnomers; these, however, are very trivial errors, and are amply compensated by the important information to be found in almost every page of the body of the work.

Dr Luscombe's work, though short, contains a great deal of information, and, by the mode in which it is drawn up, is equally adapted for medical and non-professional readers; the medical matter being thrown in, in the form of notes.

His practice in Intermittents and Remittents was extensive.

"Nearly 500 cases of intermittents fell under my care in the Island of Jersey, and in the Province of the Alentejo in Portugal; and in the treatment of this disease, I have always found it necessary to premise free evacuations by *emetics*, and brisk *purgatives*, such as calomel, and the compound extract of colocynth, previous to the administration of the bark.

"After the necessary evacuations had been premised, it was my endeavour to break the chain of morbid associations by administering a full dose of tincture of opium, and sulphuric æther, on the first appearance of the rigors, which denoted the approach of a paroxysm, or by giving an ounce of bark in powder, (in as large doses as the stomach could bear,) within a short period of an expected paroxysm; which by these means was frequently prevented, and when the morbid associations had been thus once broken, the prevention of the succeeding paroxysm was rendered considerably more easy by means of the repetition of the bark, the use of which I found it necessary to continue for some time after the paroxysms had ceased.

"The arsenical solution has also proved a very efficient remedy in my hands, but I have always found the sulphate of zinc nearly or quite inert; and, on the whole, I give the preference to the bark administered in as large doses as the stomach will retain, shortly before the paroxysm is expected, and continued for a considerable time after the paroxysms have altogether ceased to occur.

"In the Alentejo, however, many cases occurred in which the disease could not be cured, so long as the patient remained in the district in which it had been contracted; removal to a more healthy situation, therefore, became necessary, and when visceral disease was threatened as a sequela of intermittent fever, a mild course of mercury was the only remedy to be relied on, together with change of climate." pp. 13, 14.

The symptoms of the Endemic Remittent Fever he usually found to be

"a very severe pain in the head, often accompanied with nausea; the temperature of the body considerably increased; the pulse fre-

quent and full; the thirst extremely urgent; and the tongue covered with a whitish crust of mucus.

"Greatly increased secretion of bile was evident from the very large quantities passed by stool; and I have seen several cases in which the whole body of the patient became of a dark yellow colour,—and the urine and serum from blisters, in those cases, tinged the linen as dark yellow as saffron could have done.

"Great disturbance of the functions of the sensorium took place; and, as the autumn advanced, irritability of the stomach became the most dangerous and distressing symptom.

"Extreme debility occurred at the termination of the disease, even in cases where it had been of very short duration.

Two hundred of the 34th regiment were attacked with endemic fever during the summer and autumn of 1811; but although the disease frequently assumed the continued form, it did not, in any case, appear to me to be contagious.

"In my treatment of this disease, I had recourse, early in the season, to emetics, in the first instance, and these were commonly composed of the tartrate of antimony, by means of which great quantities of bile, altered from its healthy appearance, were evacuated in most cases; but as the autumn advanced, the determination of blood to the head, and great irritability of the stomach, contra-indicated the use of emetics.

"Active purgatives were had recourse to *in all cases*, and the most decidedly beneficial effects were produced by their operation. I commenced with calomel and the compound extract of colocynth, six grains of each,—and if this did not purge freely in the course of a few hours, it was followed by the supertartrate of potass and jalap; or by infusion of senna with sulphate of magnesia, until free evacuations ensued. When great irritability of the stomach existed, pills, composed of calomel and the compound extract of colocynth, were the only purgative medicine which would remain on the stomach; and it was often necessary to give the saline draught in a state of effervescence to allay that distressing symptom, so as to allow any thing to remain on the stomach; but purging alone afforded permanent relief, and it was by purgatives given in sufficient doses to operate with activity, and repeated with unwearied assiduity, that the disease was conducted to a favourable termination.

"In cases in which the head was much affected, leeches were applied in considerable numbers to the temples; and where those were not at hand, it was certainly expedient that blood should be abstracted from the temporal artery, or external jugular vein: but, in the Peninsula, we had almost always leeches in great abundance.

"Antimonials, combined with calomel, the neutral salts, and the most abstemious regimen, completed my usual plan of treatment, to which camphor, combined with the liquor acetatis ammoniæ, and blisters, were sometimes added in lingering cases; but my principal reliance was on brisk and repeated purging, and local abstraction of blood from the head.

"Bark was administered for the removal of the extreme debility which invariably occurred at the termination of the disease: and we generally had it in our power to obtain moderately good wine from the commissary for our convalescents." Pp. 20—24.

Of the utility of Gestation after Typhus, he speaks as follows:

"In many cases, great debility remained at the termination of the disease, so much so, that although the fever appeared to have finished its course, still the system did not possess sufficient energy to resume its healthy functions; in these cases, very great advantage was derived from *gestation*, as recommended by Dr Jackson; the men, when in the state above described, were taken out into a spring waggon, and laid on a mattress; and if in a state of extreme debility, attended by a medical officer, with a supply of wine and cordials, and conveyed four or five miles into the country, usually over Barham Downs, and they were almost always found to revive during their excursion; broth was prepared for them on their return, which they usually took with appetite, and soon after enjoyed sound sleep, from which they awoke greatly refreshed and invigorated." pp. 36, 37.

Dr Luscombe bears testimony to the utility of blood-letting in Dysentery, to which he had recourse in all cases where tenderness was experienced in the abdomen, on moderate pressure by the hand, which he justly considers to be the criterion by which we are to have recourse to the abstraction of blood in recent cases of that disease. Opium he considers as highly deleterious in all cases of *acute* dysentery, but in the *chronic* disease a starch glyster, not exceeding four or six ounces, and containing two drachms tincture of opium, thrown up two or three times in twenty-four hours, he mentions as very useful in relieving the distressing tenesmus, and this is the only form in which he does not consider opium as decidedly injurious. Of the contagious nature of the disease he entertains great doubts.

Dr Luscombe is a moderate mercurialist in the treatment of Syphilis. In the treatment of the secondary form, he gives the preference to the oxymuriate administered in solution, and in small doses, together with which he often prescribes the compound decoction of sarsaparilla.

Our limits do not admit of our following Dr Luscombe through the remainder of his book, but what we have already extracted from it, will serve to show that we entertain a high opinion of him as a medical practitioner. The following extract will, we think, prove him to be an amiable man: it is to be found under the head Religious Instruction:

"It may, I hope, be asked without impropriety, why it is, that our soldiers, who have devoted their lives to the service of their

country, should be deprived of a religious instructor and friend, which is secured to every other class of our community? And it also might be asked, if dangerous consequences to the state might not ensue, at some future period, from the prevalence of fanatical opinions among our soldiery, to the introduction of which, when employed on the home station, they have been found to be very much exposed, from not having any authorized person among them to whom they could look up for attention and well-grounded religious instruction." p. 121.

The morality of soldiers is certainly not within our sphere, but we would venture to ask, whether paying them their balances *weekly*, might not tend to diminish the disgraceful scenes of drunkenness, and the consequent sickness, which invariably mark the monthly periods when they receive their pay? Dr Luscombe proposes to diminish the monthly balance, by providing them with superior articles of equipment, or giving them a moderate daily allowance of porter or ale. Perhaps it might be better, while their equipment is not lost sight of, to let them have a small weekly sum for pocket money. They are thus left to their own free will, and there need be little fear of this sum being allowed to accumulate, so as to admit of an extravagant debauch; for we are satisfied that few private soldiers are to be found devoid of what Johnson calls the "true military impatience of coin."

IV.

Lectures on the Blood, and on the Anatomy, Physiology, and Surgical Pathology of the Vascular System of the Human Body, delivered before the Royal College of Surgeons of London, in the Summer of the Year 1819. By James Wilson, F. R. S. &c. 8vo, pp. 429. London, 1819.

The name of the author of this volume is a sufficient recommendation. Mr Wilson has been long esteemed as one of the best teachers, and one of the most amiable men in the profession. But even had the volume appeared without such a name to recommend it, the mass of solid instruction which it contains, and the clear and unpretending style in which it is

written, would have soon ranked its author with the best didactic professional writers.

In these days, when the mania of novelty and discovery misleads so many ambitious spirits into paradox and absurdity, it is truly gratifying to find a man of acknowledged talents and extensive experience come forward, and manfully state the proper province of a systematic teacher. The address "to the reader" is so consonant to our own opinion, that we quote with pleasure the greater part of it.

"As novelty forms but a small part of the contents of this volume, some reason should be given for its publication. I was called upon rather suddenly, and certainly unexpectedly, to deliver the Anatomical and Surgical Lectures at the College; my respect for the opinion of the members of the Court of Assistants, who did me the honour of naming me to that office, rendered it impossible for me to refuse attempting the duties of it; but, at the same time, I felt that the avocations connected with my professional business would not allow me to devote so much time as I could have wished, to search for matter which might render the Physiological Discourses I had to deliver acceptable from their novelty, and in Anatomy and Surgery, I could have no matter but that which I had long taught and continue to teach in the Windmill Street School. I have never considered that the exertions of the Lecturer should be confined to attempts at displaying new facts and new reasonings; he would thus be continually obtruding on his hearers an ill-arranged assortment of crude materials, and would be exposing himself and them to the specious imposture of old matter, wearing the disguise of novelty, or would neglect the instructive observations by which such facts as are really new and intrinsically valuable had been established. The previous range of the intellect should surely be defined before attempts are made to extend its limits, and the memory should be refreshed before the imagination is exercised.

"Thus I have endeavoured to bring forward to observation such materials only as appeared to be useful, rather than new matter, and have attempted nothing beyond plain facts, and I hope intelligible reasoning on them. Had I not thought that such Lectures as I conceived worthy to be listened to by the College of Surgeons in London, might prove useful elsewhere, I never should have published them." pp. v—vii.

The Lectures of Mr Wilson are fifteen in number. Of these, seven treat of the vascular system, under which he comprehends the blood, muscular fibres, as entering into the composition of the heart and blood-vessels, the heart, arteries, veins, and absorbents. The other eight are surgical. The former series is given upon the old foundation of Arris and Gale, and the latter constitute the Museum Lectures on Surgery. It was to be ex-

pected that lectures given in the metropolis, by a pupil of William Hunter, and illustrated by John Hunter's collection, should bring forward, in a prominent manner, the opinions of these illustrious brothers; and we cannot sufficiently admire the good taste with which all notice of the disputed points of discovery have been avoided, by ascribing to them tacitly every thing to which, in the judgment of the author, they were entitled. We shall follow his good example.

We have now only to inform our readers of the contents of this volume, and to recommend it, as containing the greatest sum of information upon most of the subjects of which it treats, and arranged in the best manner.

The first lecture treats of the blood and its properties in the living body; and here we find a very candid and perspicuous view of Mr Hunter's doctrine of the vitality of the blood,—a doctrine which has been much misunderstood and misrepresented.

The second lecture details the properties of the blood when out of the circulation. The third lecture is on the muscular fibre; the fourth and fifth explain the anatomy and physiology of the heart. The sixth is on the arteries, and the seventh on the veins and the absorbents.

The second series of lectures are introduced by some very judicious remarks on surgery, from which we select the following fragments:

"Nothing imposes more on the mind than the acquirement of popularity. The performance of any great or uncommon surgical operation, makes a stronger impression on mankind from the feelings it excites, consequently is more talked of, and wondered at, than the most unexpected cures, unaccompanied by an operation, but effected entirely by the persevering attention and skill of the surgeon. Led away by the astonishment and eclat which the success of such an operation occasions when dexterously and quickly performed, some surgeons have thought that the art of operating was the most essential part of their profession, and have devoted the whole of their attention to it; forgetting that the operation, however perfectly performed, is only one point gained in curing the patient; that the complete knowledge of the case, the accidents which may happen, and the treatment which must be varied according to these accidents, are all equally essential." pp. 218, 219.

"An almost exclusive attention to operations is witnessed in the conduct of some students while attending the hospitals, and marked by the avidity with which they crowd to see them performed, when possibly they may not have inquired into the previous treatment of the diseases, and remain unacquainted with the particular circumstances which rendered the operations advisable.

"Let it not, however, be inferred from the above observations, that I wish, in the smallest degree, to lessen the necessary attention which every surgeon should pay to the operative part of his profession. No operation, however trifling, and unattended with danger, can be performed without some pain, and a certain degree of dread on the part of the patient; and cases do frequently occur, where very painful and dangerous operations must be performed to preserve life, or to prevent existence being dragged on in misery for years. Every thing which can lessen the suffering and encourage the mind of the patient, should carefully be attended to. It is therefore the indispensable duty of the surgeon to take every opportunity of perfecting himself in this, which is so marked a part of his profession." pp. 219, 220.

"As surgery then consists of something more than the knowledge of external applications or performance of operations, as it consists in the knowledge of the principles of disease, and as the principles of external and internal diseases are exactly similar, each of them having the same causes, indications, and frequently the same terminations, it is obvious, that the knowledge which will enable a man to practise physic with success, is equally necessary to form a good surgeon. From the difference in situation, we are enabled to try modes of cure in external diseases, which we are prevented from doing in internal. In the one, the disease is perceptible to the sight, consequently its extent and nature is easier to be ascertained, and sometimes, when judged necessary, it is capable of being extirpated; in the other, it can be known only by its symptoms, and treated only by the exhibition of medicines: the difference in practice arises entirely from the difference of situation; but the knowledge of the principles of the disease is equally necessary in both.

"The connection between external and internal diseases is indeed so inseparable, that there is no part of the knowledge of a physician, which would not prove useful to a surgeon, and every physician must find himself materially benefited by an extensive knowledge of the theory and practice of Surgery.

"This connection renders it almost impossible to ascertain exactly the boundaries of the two professions, for cases do occur which appear to belong equally to the one as to the other. Celsus was aware of this, for he says, 'Omnes medicinæ partes ita connexæ sunt, ut ex toto separari non possint.'" pp. 221, 222.

The rest of this introductory lecture is upon diseases generally, and on symptoms. The ninth lecture treats of inflammation; the tenth of union by the first intention, and of suppuration; the eleventh of ulceration, granulation, cicatrization, and mortification; the twelfth of the treatment of inflammation; the thirteenth of hæmorrhage; and the fourteenth and fifteenth of aneurism and the diseases of the veins.

V.

Principles of Military Surgery; comprising Observations on the Arrangement, Police, and Practice of Hospitals; and on the History, Treatment, and Anomalies of Variola and Syphilis: illustrated with Cases, Dissections, and Engravings. By JOHN HENNEN, M. D. F. R. S. E. Deputy-Inspector of Military Hospitals. Second edition, with numerous Additions. 8vo, Edinburgh, 1820. pp. 580. *with Six Plates.*

THIS work, although appearing under a new, and, as we think, equally appropriate title, is considered by its author as only a second edition of his former work on Military Surgery, of which we had occasion to express a very favourable opinion in the 14th volume of this Journal.

Considering the numerous publications which are every day issuing from the press, upon subjects strictly and legitimately within the provision of a Medical Review, we are in general under the necessity of precluding from our pages any mention of the subsequent editions of works of which we have previously noticed the first impressions. In departing from our established practice on the present occasion, we trust, that the importance of the subject treated of in those additional chapters which Dr Hennen has given in the present work, will sufficiently justify us; and to these chapters we propose chiefly to confine our remarks, premising, that much additional matter has also been introduced upon those subjects which were treated of in the first impression of this work.

In Chapter XX. page 449, Dr Hennen treats of miscellaneous points connected with military surgery—of the examination of recruits—of the detection of feigned diseases—and of the proper objects of attention in drawing up topographical reports—which are now called for from every military surgeon on a change of station.

The examination of recruits forms a most important part of the duty of a military surgeon; and, as a regulation has been lately introduced, by which the surgeons intermediately approving them are burdened with the expences of recruits who may be finally rejected at the head-quarters of their regiments, it becomes medical officers to be very circumspect in their conduct upon this point. Our military brethren must feel indebted to

Dr Hennen for his hints on the subject, and would do well to adopt the systematic mode of proceeding which he recommends in examining recruits, and which, to our own knowledge, is far from being universally adhered to. In time of war, when there is often a sudden and urgent demand for increasing the army, and when every allurement is held out to induce volunteers to enter it, surgeons may perhaps allow themselves to overlook some of those minor blemishes, which are at present considered sufficient causes of rejection; but in time of peace, we conceive that too much pains cannot be taken to prevent the admission into the service of a puny and inefficient description of men, and to form an effective and well-disciplined stock, upon which future levies may be speedily ingrafted in case of emergency. With this view, it might not perhaps be ineligible to raise the present standard both as to age and size. At present, we should take none but men of the best description; and when lawless necessity compels us, we must take such as we can find.

On the subject of feigned diseases, we have long wished to see something which could assist us in deciding upon many perplexing cases, which, although perhaps more familiar to military surgeons, are far from being unknown in some of our civil establishments, where the cunning and worthless impostor, attracted by the prospect of food and shelter, is sometimes admitted, to the exclusion of a more needy and deserving object. Dr Hennen, in his observations upon this subject, has given some interesting details of the ingenious impostures practised by different individuals, and of the equally ingenious devices employed for their detection. At page 485, he details at some length a singular case of somnolency, accompanied with mental hallucination, originating apparently from fear, in the person of a soldier who had been destined to serve in a corps stationed on the coast of Africa, and who was treated for some time in the Military Hospital at Hilsea, under the superintendence of our author and Dr Knox. In concluding his remarks on this case, he observes, with a feeling which does him credit,

"Whatever doubts may arise as to the existence of a systematic attempt at simulation, in this and other cases, that humane principle should never be forgotten, which leads us to consider, that the escape of many guilty is a much less evil than the unjust punishment of an innocent individual." p. 464.

At page 466 we have an account, by Dr Cumin of Glasgow, of a remarkable case of increased action of the heart, produced at will, somewhat analogous to the case of the Honourable Colonel Townsend, related in Cheyne's English Malady. The limits which Dr Hennen has assigned to this chapter, are ob-

viously insufficient to do full justice to the subject of feigned diseases; but so far as he has gone, we consider practitioners in general, but more especially those connected with hospitals, both civil and military, under obligations to him for many useful hints.

The heads of inquiry upon Medical Topography will, we think, be found of essential service in guiding the researches of the junior members of the army medical department, and of such as are not habituated to this species of investigation. Dr Hennen divides these inquiries into three different classes or sections,—the station, the barracks, and the hospital,—and under each of these heads are remarks upon the most useful and necessary points to be adverted to. A series of reports drawn up in this way will afford a mass of very important information; and there are many points connected with these inquiries, in which practitioners in civil life, in various parts of the kingdom, are greatly interested; although they probably would never have been undertaken upon so general and extensive a scale, but for the enlarged and liberal views of the present Director-General of the medical department of the army.

Chapter XXI. is devoted to the consideration of Variola and Vaccination, and consists chiefly of a connected and abridged statement of our author's observations on these subjects, which have already been communicated to the public through the medium of this Journal. In our review of Dr Thomson's work, in our last number, we entered so fully into the subject of vaccination, that we feel averse to impose, either upon our readers or ourselves, any farther consideration of it at present, and shall therefore proceed to the last chapter of Dr Hennen's work, which treats of Syphilis.

In the introductory part of this chapter, our author adverts to the peculiar opportunities which the army surgeons have at all times enjoyed of making themselves masters of the treatment of syphilis; and observes,

"The opportunities which military hospitals afford for extensive observations and comparisons, are highly favourable to the elucidation of the natural history of this disease, so that it is really a greater object of surprise that more light has not been thrown upon the subject by the officers of these establishments, especially considering that no interested views could have interfered, than that they should at length have fallen into the fair and philosophic course of investigation. Nothing can fully account for this except the undoubting reliance that has been placed,—justly in many instances,—on the sanative powers of mercury." pp. 488, 489.

He afterwards enumerates the observations of different au-

thors, chiefly medical men connected with the army, and dwells at some length upon the use of corrosive sublimate, as introduced into the military hospital at Vienna, by Baron Van Swieten, by which, says our author, "he has rendered a most important service to physic."

"He was aware of the injuries so often inflicted by salivation, and he introduced the alterative cure by the oxymuriate of mercury into general notice. Nothing could exceed the violence of the opposition to this plan; it was very generally decried, and by many it was pronounced a monstrous, inhuman, and unjustifiable measure. Van Swieten, who held the highest medical station at Vienna, and had the control of the military medical department, sent 300 soldiers to the hospital at Saint Mark, in order to institute upon them an experiment on a large scale as to the power of his new remedy. The results of this measure are sufficiently interesting, and strongly illustrate the difficulty of introducing any innovation in the treatment of the venereal disease. With the exception of six who were affected with incurable caries of the bones previous to their admission, *every one of these individuals went out of hospital cured.* In a little time afterwards, an accusation was brought before one of the highest military tribunals, in which Locher, the physician of the hospital, was charged with dismissing from that establishment 300 soldiers, not only uncured, but even in a far worse condition than when they entered it. Fortunately the records of the hospital were in existence, but what was still more convincing, all the soldiers were at the very time within the walls of Vienna. "The physician," says Van Swieten, "insisted on a strict examination of the matter by law, nor did I neglect doing it. The delays of the law were spun out under various pretexts, and the calumniator, in the mean time, ran away, died, and escaped his deserts Locher afterwards quietly continued the cure of the venereal disease in his usual manner." pp. 491, 492.

At page 495 Dr Hennen observes,

"Previous to inquiry into the effects of some of the numerous remedies employed in the cure of syphilis, it is proper to direct our attention to the opinions of those who hold that it has undergone great changes in its nature since the end of the fifteenth century. It may be that such an alteration has been produced in it either from the effects of remedies, or by natural causes, as seriously to influence the results of our treatment at the present day. The analogy of leprosy and of scurvy, which at one time raged throughout Europe, but are now almost unknown, is strongly in favour of the supposition of a change of character in syphilis; we have also direct testimony which shows that its symptoms have become milder and more tractable.

"No author is better entitled to speak on the disease than the well known German Ulrich de Hutten, if personal suffering can confer such a melancholy distinction. After having suffered for nine years under it, and we may naturally suppose studied its history mi-

mutely, he tells us in his work published in 1519, that for the first seven years after its appearance in Germany, it raged with the utmost violence, but that when he wrote, its virulence had considerably abated. In 1563, upwards of forty years afterwards, Bernardinus Tomitanus of Padua, after noting some changes of symptoms which had taken place in the disease since its first appearance in Europe, bears strong testimony to its increasing mildness at the time he wrote. All the pleasures of social life, he says, had been poisoned on the breaking out of the Morbus Gallicus; in his time, however, men were less terrified, and no longer abstained from convivial intercourse with those affected; they began also to contract marriages without their former fears, and their inquiries were now influenced more by the amount of the dower they expected, than by the fear of pox. He then goes on to predict, that, in a short time, the disease would no longer be communicable by coition, as it had become old, and was hastening to decay.

"The learned and indefatigable Astruc has collected the authorities of various physicians and historians to the same effect, including a period from 1546 down to 1711, to which he adds his own testimony, dated 1735. In it he says, "I have, by careful and repeated observation, found the venereal disease daily to grow milder; it may perhaps be more frequently contracted than formerly, yet its rage is less violent, its symptoms are not so many, so painful, nor so difficult to be cured; it yields more readily to remedies properly applied, and, in a word, seems by little and little to approach towards its close." pp. 495—497.

Upon this supposition of changes in the nature and characters of the disease, at different periods of its history, is probably to be explained the transient reputation of many substances which have been renowned for the cure of syphilis, and also many of the injurious effects which have followed the protracted and unavailing use of mercury in different cases. To these points our author next adverts, and, after enumerating a formidable catalogue of diseases, which are said to be evolved or aggravated by the use of mercury, he says,

"While I have thus enumerated many of the ill effects produced by mercury when it acts as a poison, I must give my strongest testimony to the admirable results which proceed from its judicious use in persons not constitutionally disposed to be injured by it, and who do not lead profligate lives, or are not exposed to the foul air of hospitals fully saturated with its fumes. In common with other physicians, I have, however, frequently observed that mercury, like many other substances with which we are familiarly acquainted, frequently mitigates in small doses, but without effectually removing, many of the symptoms which it has occasioned when very largely used, a property which has often led to serious mistakes, and which must detract considerably from the value of any examples drawn from the

cases of those whose constitutions have been constantly charged with the mineral, when such cases are brought forward as unquestionable proofs of its efficacy, where syphilis has resisted every other means of cure. I would by no means, however, be understood to assert, that many cases have not yielded to mercury, which had previously resisted every other medicine. Of its unquestionable efficacy there can be no doubt; but its indiscriminate employment in every case, whether old or recent, suspicious or confirmed, and without any view to the patient's diet, or his general health, has produced the most dreadful consequences. To reduce its employment within the limits where it can be salutary only, without creating or evolving other diseases, is the best means of supporting the reputation of the medicine. Where Hunter and Abernethy, Pearson and Carmichael, have hesitated, we surely may be permitted to pause. These eminent men greatly contributed to the elucidation of the circumstances under which mercury was improper; their precepts and their example have reduced the quantity formerly given to comparatively moderate bounds; but it remained for the inquiry which is at present prosecuting in the military hospitals, to show, that even these bounds are too extensive, and that the practitioner has, in a vast number of instances, the option whether to defer its use, to limit it, or to omit it altogether. Settled as it now is, beyond a doubt, that syphilis does not run on uninterruptedly to a fatal event if not checked by mercury, that practitioner cannot be admitted to do full justice to his patient, who does not avail himself of the fact;—to his own judgment must be left the extent to which he may be pleased to do so." pp. 512, 513.

Dr Hennen then directs the attention of his reader to the more recent experience of the army medical department in the treatment of syphilis without mercury, supporting his observation by various tabular views of the results of different modes of practice, and premising that,

"In the practical remarks which I am now about to make, I propose to embody the whole of the information that I have been able to collect in the various military hospitals under my superintendence for the last four years, as well as from the latest official documents which have been promulgated to the army by the Medical Board, and of which, by the liberality of Sir James M'Grigor, I am permitted to avail myself. But before I enter upon this subject, in order to avoid all possibility of misconception or misrepresentation, I feel it incumbent upon me again clearly and distinctly to avow, that I entertain no doubt of the utility of mercury, when properly employed as an auxiliary in the treatment of venereal complaints, especially when they become chronic; but while I admit this, I am equally confident that the disease, like many other diseases, is susceptible of a spontaneous cure in many cases; that in many others it is curable without the employment of mercury, either externally or internally; and that where mercury is employed, the doses may be greatly

diminished from what was lately supposed necessary, and that its effects may be always limited to a moderate irritation of the gums, so as that the poisonous effects of the remedy may be as much as possible avoided. Having premised thus much, it is also necessary that I should say, that, convinced though I am of the possibility and facility of the non-mercurial cure, I am by no means authorized from my experience to assume, that its *eligibility*, in *every* case, or under *all* circumstances, is yet established. How far the observations I have to offer may tend towards this end, it will be for the reader to judge, and for further experience to determine. All theories, or preconceived opinions on the subject formed in the closet, and promulgated by *talking* physicians and philosophers, if unsupported by actual experiment, I look upon as perfectly worthless. No man could have been more firmly convinced than I was, five years ago, of the extravagance of supposing that this disease could, under any circumstances, be cured without mercury, (to which alone I had trusted in at least a thousand cases,) until conviction was forced upon me by repeated observation, confirmed by an attentive consideration of the testimonies of the best-informed practical writers of past times, and the opinions, both oral and written, of those of the present, whose opportunities have been such as to entitle their opinions to any weight on a practical subject.

"It is painful to confess that we are not in possession of the knowledge of any invariable characteristic symptoms, by which to discriminate the real nature of the primary sore, and we are equally at a loss in many of the secondary symptoms. I am well aware that some practitioners have assumed to themselves the possession of a "tactus eruditus," by which they can at once distinguish a chancre, or a venereal ulcer or eruption, in which mercury is indispensable, from one of a different nature, but I have seen too many instances of self-deception to give them all the credit that they lay claim to. It would be by no means difficult to show that the high round edge,—the scooped or excavated sore,—the preceding pimple,—the loss of substance,—the hardened base and edge, whether circumscribed or diffused, and the tenaciously adhesive discharge of a very fetid odour, are all observable in certain states and varieties of sores unconnected with a venereal origin. The hardened edge, and base, particularly, can be produced artificially by the application of escharotics to the glans or penis of a sound person, and if any ulceration, or warty excrescence, previously exists on these parts, this effect is still more easily produced." pp. 516, 517.

In this part of the work our author introduces a copy of a circular letter from the heads of the army medical department, containing in a very concentrated form a mass of well-digested information, but for this we must refer to the work itself. In noticing the objection to the non-mercurial practice from the possibility of the disease being conveyed to the offspring of a parent imperfectly cured, Dr H. thus expresses himself:

"A fresh objection has recently been started to the non-mercurial practice in Syphilis, by Dr Hamilton junior, Professor of Midwifery in the University of Edinburgh, in his work on the "Uses and Abuses of Mercurial Medicines." He conceives that very alarming consequences are likely to arise to children yet unborn from the practice of the army surgeons. But while I most willingly acknowledge the high character, acuteness, and zeal of my former teacher, I cannot admit the validity of the arguments he adduces to prove the truth of his opinion, which appears to me to be chiefly founded on the assumption that a point of pathology is perfectly settled, which still remains not only dubious in all its relations, but which is actually denied by very high authorities.

"It must be recollected that there are various opinions on the subject of the venereal disease of the fœtus in utero: they are as follows: 1st, It is contended that the *mother*, not the father, communicates the disease to the fœtus. 2d, That it is the *father*, not the mother. 3d, That the child can be diseased by both parties. And 4th, Mr John Hunter denies the possibility of the fœtus in utero being affected by either.

"I am well aware of the difficulty of forming a judgment on these points, and of the great delicacy necessary to be observed in investigating them; but it becomes an important duty for every professional man to throw what light he can upon the subject, and under this impression I shall first state my speculative opinions, and then I shall detail such facts as I have been able to collect. Unless a man has primary symptoms himself, I apprehend it is physically impossible for him to communicate primary symptoms to a female. Unless a female has primary symptoms, I hold it equally impossible for her to have secondary symptoms; and except she has secondary symptoms, she, I apprehend, cannot communicate them to the children in her womb; she may, indeed, as we all know, communicate primary sores to the fœtus in its passage through her vagina. With regard to the facts to be met with in authors, many instances are on record, and within our daily view, where women having secondary symptoms bring forth healthy children; and many, where fathers, who have long had secondary symptoms, beget a perfectly sound offspring. That children are born with a disease, *supposed* to be syphilis, and that this disease is not only fatal to them, but can be communicated by them to their nurses, and be propagated by the nurse to the destruction of more lives, is a fact that no man can pretend to deny. The nurse, however, must have a primary sore on her nipple or elsewhere, before she can disease the child. I know it to be a positive fact, that a nurse with secondary symptoms may suckle children with perfect impunity to them. Many instances have occurred where children have been diseased without the most remote proof that the father has ever been poxed. Many others where there is equally strong reason to suppose that the mother has never been poxed; and many where there is every reason to suppose that neither party have had the disease. To these positions, which are

applicable to the individuals of both sexes, has been added another, which is common to each, viz. that the wounds and fractures of persons infected with syphilis, unless when inflicted on diseased parts or their neighbourhood, heal as readily as those of uninfected persons,—a fact first insisted upon by Petit, which shows how little the powers which regenerate or model the human frame are affected by the syphilitic virus. Instances have occurred where a sound mother has brought forth a diseased child, and without taking any medicines of a mercurial kind, has afterwards brought forth a sound child. A case has been stated to me, where five children were thus *chequered*, while the mother, sound to all appearance, had never taken one grain of mercury; and to my own knowledge, a lady has brought forth three children at successive births, the 1st and 3d diseased, the 2d sound, without having taken any medicine but the decoction of the woods: the husbands in both cases men of irreproachable lives, and the women of acknowledged virtue. Whether there are any cases on record, where of two children born at the *same time*, one has been diseased and the other sound, I have not yet been able to ascertain." pp. 549—551.

A tabular view is thus introduced, showing the number of children born of parents belonging to the troops under our author's superintendence, who have undergone the non-mercurial cure for syphilis, with the results as far as can be ascertained.

"From this table it appears, that of 13 children born of parents treated without mercury, 11 have been born alive, and healthy, and two have been still-born: none of the 11 children have since died, nor manifested any suspicious symptoms of ill health, although some of them are now in their third year. Indeed, I question whether the balance of survivorship (assumed on the principles of Halley, De Moivre, or Price) is not in favour of the children born of parents treated without mercury; but this is a point which must be ascertained from a much greater number of individuals than my table at present comprehends." p. 554.

After some farther observations on the appearances of the disease in infants, Dr Hennen concludes his observations on syphilis in the following terms:

"Thus have I given a faithful account of all that I have learned with regard to the non-mercurial treatment of Syphilis, as it has been practised in the Military hospitals. It gives me great pleasure to be able to state, from good authority, that the practice has been adopted by some of the Naval surgeons with a success even greater than ours; and I have at present before me a letter, which, I trust, will soon be published in a more enlarged form, giving an account of the successful treatment of no less than fifty patients, in one ship, in one only of whom did secondary symptoms appear, (under the form of blotches,) and they were entirely removed in the course of eight

days, without the employment of one particle of mercury, either externally or internally. While these sheets are going through the press, I have also had before me testimonies from the officers of our own service, which still farther tend to confirm the principles which I have advocated. These documents will, at some future period, be submitted to the judgment of the profession." p. 560.

In transferring so large a proportion of the chapter on syphilis to our own pages, we have been actuated by the desire of doing justice to our author's views, supported, as they are, upon the present, and every other occasion, by extensive experience and important official documents. The readers of this Journal are already familiar with Dr Hennen as a writer on syphilis, and we have always been inclined to look upon him as one of the most temperate and cautious of the non-mercurialists. He has upon no one occasion denied the utility of mercury in some cases of syphilis, while he has always appeared anxious to support his conclusions by a reference to those tabular views of his practice, to which we are extremely partial. He has been particularly guarded in giving loose to his imagination, or permitting his doctrines to outrun his facts.

We lay claim also ourselves to some experience in the treatment of syphilis, and are conscious of early prepossessions in favour of the mercurial regime, which we find it extremely difficult to shake off, confirmed, as they have been, by a share of success which we think will bear a very favourable comparison with the results of any other mode of treatment whatever; and we sometimes feel surprised that some of our brethren, who must have been educated at the same time with ourselves, or perhaps at a period somewhat antecedent to it, should have been able so completely to emancipate themselves from what was the current doctrine of the schools fifteen or twenty years ago, and to adopt doctrines in many respects so different. This certainly does them much credit, and requires an effort of candour not always to be met with in the profession.

Much has been said of the progressive nature of syphilis, and of the insufficiency of any mode of treatment uniformly to prevent the occurrence of secondary symptoms; but we see the progress of other diseases interrupted by appropriate treatment, and why may it not be so here? We have seen an attack of fever cut short by the cold affusion; we have seen the progress of pneumonia arrested by bloodletting; and why may not the progress of syphilis be arrested by an adequate course of mercury? Notwithstanding an avowed partiality to the use of this medicine, we trust we are still open to conviction; and, as we conceive that the more or less frequent occurrence of secondary symp-

toms is the grand point upon which the comparative merits of the one or other mode of treatment should ultimately be made to hinge, we are willing to rest the value of mercury upon its power of preventing secondary symptoms, when properly and judiciously employed. We could wish to see a statement of the frequency of secondary symptoms after superficial and imperfect courses of mercury, compared with the frequency of these symptoms, after what have been deemed full and adequate courses of this medicine in the treatment of the primary symptoms. We have made arrangements for a tabular view of the results of our own practice on this point; but as the experience of persons not connected with a military hospital, or with an institution exclusively appropriated to the cure of venereal complaints, must necessarily accumulate slowly, a long period must elapse before our observations can be deemed worthy of being laid before the public, and we should rejoice to see a statement of this kind from any of our military brethren who may adhere to the mercurial plan of cure. If it shall distinctly appear that an adequate course of this mineral employed for the cure of primary venereal ulcers, in a constitution otherwise sound, has no power of preventing ulcerations of the throat, eruptions on the skin, and various other sequelæ, we know no useful purpose to which it can be directed, and will renounce it for ever in the treatment of syphilis.

The plates are the only other important addition to Dr Hennen's work which remains to be noticed. They are six in number, illustrative of various fractures and injuries of the bones by shot and sabre wounds, and the anatomy of stumps both in their sound and morbid state. They are extremely well engraved by Mitchell, and form a most useful and interesting part of the work.

In speaking of Dr Hennen's book as a whole, we cannot but admire the patient and laborious research, the indefatigable zeal and industry, which must have actuated the author in its composition; and we confidently recommend it to all classes of practitioners, both civil and military, as a work abounding with practical good sense, and replete with useful and available information.

VI.

Reports on the Epidemic Cholera, which has raged throughout Hindostan and the Peninsula of India, since August 1819. Published under the authority of Government. Bombay, 1819. Pp. 228 and xliii.

WHILE typhus, the constant follower of war, was extending its ravages over even those parts of Europe which the sword had spared, an epidemic of another kind, and more alarming, as its effects were more speedy, and its causes more obscure, spread over the whole of our eastern possessions. Slight notices of it in private letters from India, and in the periodical publications of the East, besides the able communication to ourselves from Mr Anderson, (Edin. Med. Journal, Vol. XV, p. 354,) had only made us more anxious for a detailed and official account of this striking malady; and we hasten to take advantage of the very able report of the Bombay Medical Board, to make our readers thoroughly acquainted with the history of the epidemic, and, what rarely occurs in our professional pursuits, of the means by which it may be almost stripped of its terrors. In performing this public duty, we shall almost confine ourselves to extracts, never having seen the disease in question, and understanding that a still more copious and systematic work upon the subject is preparing at Calcutta.

"The cholera first appeared in August of last year (1817) in Zila Jessore, situated about a hundred miles north-east of Calcutta. There had been no previous marked peculiarity in the weather. The preceding cold and hot months were no wise different from those of former years; and the rainy season was proceeding with its wonted regularity. To the authorities on the spot there, the disorder seemed at first to be of a purely local description, and attributable to the intemperate use of rank fish, and bad rice. They were soon undeceived. After nearly depopulating the town of Jessore, it rapidly spread through the adjoining villages, and ran from district to district, until it brought the whole province of Bengal under its influence. It next extended to Behar, and, having visited the principal cities west and east of the Ganges, reached the upper provinces. There its progress was more irregular. Benares, Allahabad, Goruckpore, Lucknow, Cawnpore, and the more populous towns in their vicinity, were affected nearly in the regular course of time. But it was otherwise in more thinly peopled portions of the country. The disease would sometimes take a complete circle round a village, and, leaving it untouched, pass on, as if it were about wholly to depart from the district. Then, after a lapse of weeks, or even months, it would suddenly return, and, scarcely reappearing in the parts which had already

undergone its ravages, would nearly depopulate the spot that had so lately congratulated itself on its escape. Sometimes, after running a long course on one side of the Ganges, it would, as if arrested by some unknown agent, at once stop; and taking a rapid sweep across the river, lay all waste on the opposite bank. It rarely, however, failed to return to the tract which it had previously left. After leaving a district or town, it sometimes revisited it, but in such cases the second attacks were milder, and more readily subdued by medicine, than those in the primary visitation.

"The disorder shewed itself in Calcutta in the first week of September. Few were seized in the beginning; but of those few scarcely one survived. Each successive week added strength to the malady, and more extended influence to its operation. From January to the end of May, it may be said to have been at its full height; and during the whole of that period, the deaths in the city seldom, by the police returns, fell short of 200 a week.

"It, in turn, attacked every division, and almost every corps in the army. Of its fatal effects amongst the troops, a melancholy and signal instance is afforded in the history of its appearance in the centre division of the field army, under the personal command of the Most Noble the Commander in Chief. There it commenced its attack on the 18th or 19th of November; was at its utmost violence for four or five days; and finally withdrew in the first days of December. The division consisted of less than ten thousand fighting men; and the deaths, within twelve days, amounted, at the very lowest estimate, to three thousand; according to others to five, and even to eight thousand. The average loss of rank and file was between eighty and ninety men a-battalion.

"The Epidemic was long in crossing the Bundlekund and Rewa Hills. It began to shew itself at Jubbulpore on the 10th of April; prevailed generally amidst the corps posted there, at Mundelah, Saugor, and other subordinate stations, to the 21st, and nearly disappeared before the end of the month. Here its influence was singularly irregular. In the same camp, and under circumstances precisely similar, some corps were entirely exempt; others had a few mild cases only; and others, again, suffered very severely. The same irregularity held in different descriptions and classes of troops. The disease did not reach Colonel Adams's camp till the 29th of May. It raged very violently during four or five days; and continued its operations in a desultory manner till the succeeding month. In Bengal, and the middle provinces, it may now perhaps be considered as nearly at an end. Cases no doubt still now and then occur in Calcutta, and its vicinity; but these are rare, and should rather be reckoned sporadic, than as proofs of the subsistence of the epidemic. The returns from the different divisions of the army now leave the head of Cholera, Morbus, in most cases, blank; and the reports of the civil surgeons are equally decisive of its general disappearance. At Delhi, Futtigur, and others of the more northern stations, whither the disease was long in spreading, it is still, the Board believe, in full force, and producing the most alarming mortality.

"Colonel Adams's force was on the 29th or 30th of May in the neighbourhood of Nagpour, where the disease had raged for some days. We do not know the exact period at which it appeared at Jaulnah, but believe it to have been the latter end of June or beginning of July, immediately after the arrival of a detachment from Nagpour. After passing over a space of 200 or 220 miles, after visiting Aurangabad and Amednuggur in its course, it reached Seroor, a distance of 150 miles, on the 18th or 19th of July. Towards the latter end of the same month it appeared in the city of Poona, although the troops encamped in its neighbourhood continued healthy for some time after. On the 6th of August it broke out with great violence at Panwell, a considerable village on the main line of communication between Poona and Bombay, separated from the latter by an arm of sea, and distant about 15 or 20 miles; but between which a pretty constant communication is kept up by means of boats. On 9th or 10th of the same month the first case appeared on this Island, and, as appears by Dr Taylor's report, could be traced to a man who had arrived from Panwell the same day. It is also evident by Dr Jukes's report, that it spread north and south along the sea coast from the same place, and that it was imported to a village in the neighbourhood of Tannah on the Island of Salsett, distant from this place about 20 miles, by a detachment of troops that escorted a state prisoner to that garrison from Panwell. The disease did not break out at Mahim, on the extremity of this island, distant only five or six miles from the principal native town of Bombay, until it had been established in the latter; it then gradually spread over the western side of the Island of Salsett, through which the road from Bombay to Surat and the northern countries lies, and by which, during the south-west mousoon, is the principal line of communication. By the observation of some individuals who, aware of the danger of the malady, and with the humane view of relieving the sufferings which it inevitably produced, carefully watched its progress, we are enabled to trace the disease as if creeping along from village to village on that island precisely in the same way, that is, by the arrival of people affected with the disease from places where it was known to prevail; and we are assured that there are some small villages on that island which, from want of this sort of communication, or from some other cause, have, after a lapse of four months, hitherto escaped entirely." pp. v—xi.

We have already noticed that the causes of this disease are involved in obscurity. The sporadic cases of cholera that we see in this country all arise in the hottest season of the year, and during the time that the subacid fruits, ripe and unripe, are greedily devoured by the people. Their appearance is sufficiently accounted for by obvious exciting causes, and none others can be suspected to act. But the epidemic of India has been so universal in its empire, extending even to the most dissimilar countries, and continuing during the most opposite sea-

sons, that its prevalence cannot be accounted for by causes peculiar to individuals, to the air, or to situation. Its almost regular progress from place to place, suggests the idea of a cause depending upon communication with the diseased; and we foresee that the operation of contagion, hitherto scarcely admitted to exist in our eastern empire, is soon to become as keenly contested as it has been in our western colonies. The Bombay Board evidently lean, though cautiously, to the opinion that it is contagious.

"In the first place, it has prevailed in degree, equally violent at all seasons of the year; in regard to temperature, from 40 or 50 degrees of Fahrenheit to 90 or 100; in regard to moisture, during the continuance of almost incessant rain for months, to that dry state of the atmosphere which scarcely leaves a vestige of vegetation on the surface of the earth. Secondly, although what has been adduced may not appear to some to be sufficient evidence of the fact, it appears to us incontrovertible, that it is capable of being transported from one place to another as in cases of ordinary contagion or infection, and also to possess the power of propagating itself by the same means that acknowledged contagions do, that is, by the acquisition of fresh materials with which to assimilate, at the same time, perhaps, subject to particular laws, with which we may never become acquainted. Aware, however, of the doubtful nature of the ground which we tread, amidst the contrary opinions that have been advanced on this subject, we shall content ourselves with stating a few facts, which have been supplied by gentlemen whose reports have been already printed, and which might be increased far beyond the limits to which we think it necessary to confine ourselves. In October last, when the disease had almost disappeared at Tannah, the attention of Mr Jukes was called to a case that had appeared in one of the apartments of the barracks of that fort appropriated to European troops; this, owing to too late application for medical aid, soon terminated fatally. Another case occurred a few hours afterwards, the subject of which was saved with much difficulty and danger; and, in the course of six succeeding days, no less than nine cases occurred in the same apartment. The curiosity of Mr Jukes was naturally excited to ascertain under what circumstances so much disease was produced, and, on examination, the ward appeared to be both badly ventilated and too much crowded with men; the place was immediately emptied, scoured and fumigated, after which no other case occurred. Since the middle of December, when we had flattered ourselves that the disease was vanishing, as the cold season advanced, the number of cases considerably increased in this island, Salsett, and the Conkan, and, consequently, excited much alarm; in some instances these cases have been confined to particular spots, and sometimes to particular houses, where the disease has attacked and destroyed in succession whole families, consisting of three, four, and five persons, while in others only a single case, or, at most,

very few, have occurred. We are utterly ignorant of any local circumstances to which such a change can be ascribed, unless by supposing that a diminution of temperature, together with exposure, may have called into action some latent remains of an active poison; otherwise it seems difficult to reconcile those facts with what is observed in ordinary epidemics." pp. xi—xiv.

"The exciting and proximate causes of this interesting epidemic, although of the greatest importance to be understood, are, like those of most other epidemical diseases, concealed under complete obscurity, "*atra caligine mersæ*." Great difference of opinion exists among practitioners, as to its contagious or non-contagious influence; and this difference very naturally arises out of the difficulty of the subject; and, when we consider the various and opposite opinions entertained by the most experienced practitioners of Europe on the same question, respecting the influenza of 1803, and the divided sentiments which have so long agitated the medical world on the subject of the yellow fever, and even typhus itself, we do not venture at present to decide on so important a point. Several irresistible facts already noticed, or related in the following reports, and its marked anomaly from all hitherto known simple epidemics, would seem to favour the doctrine of contagion, while the contrary supposition is only supported by a species of negative evidence. This is a question, however, of the greatest importance, and ought not to be too hastily entertained as proved, nor rejected as unfounded, but prosecuted with that diligent inquiry, and cautious induction, which, on every subject of science, are so necessary to the attainment of truth; and we entertain a confident hope, that the wide range through India which the disease has taken, will have afforded to some gentlemen more ample means of determining it than we possess.

"The predisposing causes are more obvious; and, on this point, practitioners are unanimous. Rapid atmospherical vicissitudes, in regard either to temperature or moisture; exposure of the body to currents of cold air, particularly the chill of the evening, after being heated by violent exercise of any kind, inducing debility or exhaustion; low marshy situations; insufficient clothing; flatulent and indigestible food, especially crude and watery vegetables, which compose a large proportion of the diet of the natives; and particularly that gradual undermining of the constitution which arises in a condensed, dirty, and ill-fed mass of population, are all, unquestionably, powerful predisposing causes; and though not necessary to the production of the disease, do, when present, offer a more unlimited range to the operation of the original cause, whatever that may be. Sad experience has, however, shown that the absence of all these affords no security against the attack; although it appears that a much smaller proportion of the higher orders of society have suffered from it on this side of India, than in the Bengal provinces; and, in this island, the disease has been confined almost exclusively to that class who are most exposed to the severest labour and privation." pp. xxviii—xxxi.

The history of the symptoms of the disease has been so well described by the Bengal Medical Board, that that of Bombay has thought proper to adopt it, noticing merely the peculiarities observed in the circumstances under their immediate inspection.

"The healthy and unhealthy; the strong and feeble; Europeans and natives; the Mussulman and Hindoo; the old and young of both sexes, and of every temperament and condition; were alike within its influence.

"The attack was generally ushered in by sense of weakness, trembling, giddiness, nausea, violent retching, vomiting and purging of a watery, starchy, whey-coloured, or greenish fluid. These symptoms were accompanied, or quickly followed by severe cramps; generally beginning in the fingers and toes, and thence extending to the wrists and fore-arms, calves of the legs, thighs, abdomen, and lower part of the thorax. These were soon succeeded by pain; constriction; and oppression of the stomach and pericardium; great sense of internal heat; inordinate thirst, and incessant calls for cold water, which was no sooner swallowed than rejected, together with a quantity of phlegm, or whitish fluid, like seethings of oatmeal. The action of the heart and arteries now nearly ceased; the pulse either became altogether imperceptible at the wrists and temples, or so weak as to give to the finger only an indistinct feeling of fluttering. The respiration was laborious and hurried; sometimes with long and frequently broken inspirations. The skin grew cold, clammy, covered with large drops of sweat, dank and disagreeable to the feel, and discoloured of a bluish, purple, or livid hue. There was great and sudden prostration of strength; anguish; and agitation. The countenance became collapsed; the eyes suffused, fixed, and glassy, or heavy and dull; sunk in their sockets, and surrounded by dark circles; the cheeks and lips livid and bloodless; and the whole surface of the body nearly devoid of feeling. In feeble habits, where the attack was exceedingly violent, and unresisted by medicine, the scene was soon closed. The circulation and animal heat never returned; the vomiting and purging continued, with thirst and restlessness; the patient became delirious or insensible, with his eyes fixed in a vacant stare, and sunk down in the bed; the spasms increased, generally within four or five hours.

"The disease sometimes at once, and as if it were momentarily, seized persons in perfect health; at other times, those who had been debilitated by previous bodily ailment, and individuals in the latter predicament, generally sunk under the attack. Sometimes the stomach and bowels were disordered for some days before the attack; which would then in a moment come on in full force, and speedily reduce the patients to extremities.

"Such was the general appearance of the disease where it cut off the patient in its earlier stages. The primary symptoms, however, in many cases admitted of considerable variety. Sometimes, the sickness and looseness were preceded by spasms. Sometimes, the patient

sunk at once after passing off a small quantity of colourless fluid by vomiting and stool. The matter vomited in the early stages was, in most cases, colourless, or milky; sometimes it was green. In like manner, the dejections were usually watery and muddy; sometimes red and bloody; and, in a few cases, they consisted of a greenish pulp, like half digested vegetables. In no instance was feculent matter passed in the commencement of the disease. The cramps usually began in the extremities, and thence gradually crept to the trunk; sometimes they were simultaneous in both; and sometimes the order of succession was reversed; the abdomen being first affected, and then the hands and feet. These spasms hardly amounted to general convulsion. They seemed rather affections of individual muscles, and of particular sets of fibres of those muscles; causing thrilling and quivering in the affected parts, like the flesh of crimped salmon; and firmly stiffening and contorting the toes and fingers. The patient always complained of pain across the belly; which was generally painful to the touch, and sometimes hard and drawn back towards the spine. The burning sensation in the stomach and bowels was always present; and at times extended along the cardia and œsophagus to the throat. The powers of voluntary motion were in every instance impaired, and the mind obscured. The patient staggered like a drunken man; or fell down like a helpless child. Headach, over one or both eyes, sometimes, but rarely, occurred. The pulse, when to be felt, was generally regular, and extremely feeble, sometimes soft, not very quick; usually ranging from 80 to 100. In a few instances, it rose to 140 or 150, shortly before death. Then it was distinct, small, feeble, and irregular. Sometimes very rapid, then slow for one or two beats. The mouth was hot and dry; the tongue parched, and deeply furred, white, yellow, red or brown. The urine at first generally limpid, and freely passed; sometimes scanty, with such difficulty as almost to amount to strangury; and sometimes hardly secreted in any quantity, as if the kidneys had ceased to perform their office. In a few cases, the hands were tremulous. In others, the patient declared himself free from pain and uneasiness; when want of pulse, cold skin, and anxiety of features, portended speedy death. The cramp was invariably increased upon moving.

"Where the strength of the patient's constitution, or the curative means administered, were, although inadequate wholly to subdue the disease, sufficient to resist the violence of its onset; nature made various efforts to rally: and held out strong, but fallacious promises of returning health. In such cases, the heat was sometimes wholly, at others, partially restored; the chest and abdomen in the latter case becoming warm, whilst the limbs kept deadly cold. The pulse would return; grow moderate and full; the vomiting and cramps disappear; the nausea diminish; and the stools become green, pitchy, and even feculent, and with all these favourable appearances, the patient would suddenly relapse; chills, hiccup, want of sleep, and anxiety would

arise; the vomiting, oppression, and insensibility return, and in a few hours terminate in death.

"When the disorder ran its full course, the following appearancer presented themselves:—What may be termed the cold stage, or the state of collapse, usually lasted from 24 to 48 hours, and was seldom of more than three complete days' duration. Throughout the first 24 hours nearly all the symptoms of deadly oppression, the cold skin, feeble pulse, vomiting and purging, cramps, thirst, and anguish, continued undiminished. When the system shewed symptoms of revival; the vital powers began to rally; the circulation, and heat to be restored; and the spasms and sickness to be considerably diminished. The warmth gradually returned; the pulse rose in strength and fulness, and then became sharp, and sometimes hard. The tongue grew more deeply furred; the thirst continued, with less nausea. The stools were no longer like water; they became first brown and watery; then dark, black, and pitchy; and the bowels, during many days, continued to discharge immense loads of vitiated bile, until, with returning health, the secretions of the liver and other viscera gradually put on a natural appearance. The fever, which invariably attended this second stage of the disease, may be considered to have been rather the result of nature's effort to recover herself from the rude shock which she had sustained; than as forming any integrant and necessary part of the disorder itself. It partook much of the nature of the common bilious attacks prevalent in these latitudes. There was the hot dry skin; foul, deeply furred, dry, tongue; parched mouth; sick stomach; depraved secretions, and quick variable pulse; sometimes with stupor, delirium, and other marked affections of the brain. When the disorder proved fatal after reaching this stage, the tongue, from being cream-coloured, grew brown, and sometimes dark, hard, and more deeply furred; the teeth and lips were covered with sordes; the state of the skin varied, chills alternating with flushes of heat; the pulse became weak and tremulous; catching of the breath; great restlessness, and deep moaning succeeded; and the patient soon sunk, insensible, under the debilitating effects of frequent, dark, pitchy, alvine discharges.

"Of those who died, it was believed, perhaps rather fancifully, that the bodies sooner underwent putrefaction, than those of persons dying under the ordinary circumstances of mortality. The bodies of those who had sunk in the earlier stages of the malady exhibited hardly any unhealthy appearance. Even in them, however, it was observed, that the intestines were paler and more distended with air than usual; and that the abdomen, upon being laid open, emitted a peculiar offensive odour, wholly different from the usual smell of dead subjects. In the bodies of those who had lived some time after the commencement of the attack, the stomach was generally of natural appearance externally. The colour of the intestines varied from deep rose to a dark hue; according as the increased vascular action had been arterial or venous. The stomach, on being cut into, was found filled, sometimes with a transparent, a green, or dark flaky

fluid. On removing this, its internal coats in some cases were perfectly healthy; in others, and more generally, they were crossed by streaks of a deep red; interspersed with spots of inflammation, made up of tissues of enlarged vessels. This appearance was frequently continued to the duodenum. In a very few cases the whole internal surface of the stomach was covered with coagulable lymph; on removing which, a bloody gelatine was found laid on the interior coat in ridges or elevated streaks. The large intestines were sometimes filled with muddy fluid, sometimes livid, with dark bile, like tar; just as the individual had died in the earlier or later periods of the attack. In most cases, the liver was enlarged, and gorged with blood. In a few, it was large, soft, light-coloured, with greyish spots, and not very turgid. In others again it was collapsed and flaccid. The gall bladder was, without exception, full of dark green or black bile. The spleen and thoracic viscera were in general healthy. The great venous vessels were usually gorged; and in one case the left ventricle of the heart was extremely turgid. The brain was generally of natural appearance. In one or two instances, lymph was effused between its membranes, near the coronal suture, so as to cause extensive adhesions. In other cases, the sinuses, and the veins leading to them, were stuffed with very dark blood."—*Bengal Report.*

"After the above luminous description, and what will be found in the reports which follow, it appears quite superfluous to enter here into any farther detail of the symptoms of this disease; we shall only, therefore, mention, that the subsequent fever, which it appears has generally accompanied it in Bengal, has been but little, if it all, observed on this side of India; and, as we have before noticed, may be owing, in a great degree, to the more extended influence of those causes, which are known to produce the bilious remittent fever as an epidemic in the Bengal provinces than on this side of the Peninsula; for it can scarcely be supposed that a disease, so uniform in its attack and in its course, should, as it were, deviate from itself in any considerable degree, without the agency of some local cause; and we entirely agree in the opinion, that it cannot be fairly considered as forming a part of it." pp. xv—xxii.

The disease, or at least one very much akin to it, has been described as occurring epidemically in this island, by Dr Sydenham, in 1669, and by Dr Brady, in 1674-5-6; and of its former appearance in tropical countries, the Bombay report refers to Mr Girdleston, Dr Clark, Mr Curtis, and Dr Johnson, as the most instructive writers.

In such a disease, so rapid in its career, and so fatal in its effects, when left to the course of nature, it is gratifying to learn, that our professional skill, so often unjustly reproached for its inefficiency, has obtained a triumph which secures it against the utmost efforts of scepticism and ridicule.

"We have before-mentioned, that Dr James Johnson, of the Royal Navy, seems to have been the first to have pointed out the best me-

thod of cure. Since most of the foregoing remarks were written, we have seen the second edition of that gentleman's valuable work, in which we find a strong corroborative testimony to the utility of blood-letting in this disease, or one somewhat similar to it, on the coast of Brasil, by Mr Sheppard of Witney, without the assistance of any other remedy. The public are greatly indebted to Mr Corbyn, of the Bengal Establishment, for his clear and comprehensive letter on this subject, at a time when the disease was producing the most dreadful ravages: the early communication of his practice has been the means of saving thousands of lives in situations where Dr Johnson's work might not be known." pp. xli, xlii.

Mr Corbyn, in his letter from Camp Eritch, dated November 26, 1817, says, on the 16th of this month 160 patients were admitted.

"I immediately gave to each patient 15 grains of calomel, which I dropped on the tongue, and washed it down with 60 drops of laudanum, and 20 drops of peppermint, in two ounces of water.

"Before I go further, it will be necessary to mention to you, that laudanum, in a large dose of 60 drops, is not a stimulant, but a sedative; whereas laudanum, from 15 drops to 20 and 30, is a stimulant; the former produces sound sleep, removes spasm and irritability, whilst the latter excites considerable uneasiness and convulsive startings.

"It will appear the more remarkable to you when I also mention that the variation of a dose of calomel has the same effects.

"Calomel, in a dose from 5, 8, to 10 grains, excites lassitude, sickness, irritation of the bowels, and, on account of its being a stimulant, acts as a good purgative; but calomel, in a dose from 15 grains to 20, is a sedative, allays vomiting, removes spasm, sends the patient to sleep, and produces one or two motions.

"You will now observe on what principle I treated my patients; not on a plan of giving powerful stimulants, but on one which at once removes the irritability and spasm, composes the stomach and the bowels, produces sleep and tranquillity of the mind, excites the secretion of the liver, and prevents the progress of inflammation.

"On the second day, it was indeed a consolatory sight to observe the wonderful change.

"The vomiting and the purging had stopped, the spasms removed, with general moisture on the skin, they had experienced sound sleep, and the pulse had returned to the wrist.

"I now gave 30 grains of jalap, which effected one or two bilious motions.—Of one hundred and ten men, I only lost two, and those were decrepid aged men, in whom the vital energies were at once extinguished,—the remaining one hundred and eight I had the good fortune to see all recover."—Addit. App. pp. 2, 3.

The appearance of the disease among European soldiers, and the striking effect of venesection in them, we quote from a letter of Dr Burrel of the 65th regiment.

"*Seroor, 27th July* 1818.

"The Cholera Morbus has been in these cantonments since the 18th instant. In the 65th regiment it commenced on the 21st.—The admissions are as follow:—

"21st 1; 22d 6; 23d 6; 24th 18; 25th 22; 26th 7; total 60; deceased 4.

"The soldiers of the regiment, not aware of the danger of the disease, did not report themselves for the few days after they felt unwell. These cases comprised the admissions of the 21st and 22d inst. When admitted into regimental hospital, the utmost debility was apparent, consisting of feeble pulse, cold extremities, nausea, and constant vomiting, with spasms. These were followed by universal sinking and coldness of the body; and death ensued in the space of twelve, fourteen, and twenty-one hours after admission. The warm bath, calomel, and opium were tried, along with the most powerful stimulants, with little success.

"On the 22d instant, when the men had been duly warned of danger from not reporting themselves sooner, I got into hospital a different description of cases; viz. men with a full pulse, hot skin, constant vomiting of white matter like thick conjee, seldom any purging; if it existed, it was like the matter vomited. Bleeding was used in every case with so much success, that I have no hesitation in recommending its adoption.

"The first symptoms in the attack were languor, with occasional pains, and sense of numbness in the extremities, violent headache, and thirst; shortly there ensued nausea, vomiting of slimy matter, weight over the præcordia, with griping in the bowels, small stools of white slimy matter, no appearance of bile from the stomach or bowels. The spasms followed in many cases so violent as to require six men to hold the patient. If relief was not immediately given, it is astonishing how soon the system sinks under the attack, marked by the ends of the fingers and toes getting cold, pulse and motion of the heart ceasing, with a livid mark round the eyes. From this state some men recovered, under the stimulating plan, although they had lain in that condition from six to twelve hours; but it is to be looked upon as one of the most dangerous symptoms of the disease.

"On admission I bled in every instance, in general to a good extent. Where universal spasms existed, venesection was carried on *ad deliquium*, the patients at the same time in the hot bath at 110 degrees. The spasms were invariably relieved, nausea and vomiting alleviated, so that the stomach bore the exhibition of the calomel in scruple doses, combined with laudanum; which doses were frequently repeated. In short, opium was given under every combination, with calomel; and I believe the calomel will be found to rest on most stomachs *per se*.

"The application of blisters was not attended with much advantage, although they might do good in some cases. Every dependence is to be placed on the hot bath, with the means above mentioned. Frictions, with stimulants to relieve the cramps, are never to be depended upon when the patient comes under treatment in the first

stage; as bleeding relieves the congestion of the liver and internal parts, and the patient falls into a refreshing sleep. The next day his gums will likely be affected, stomach quiet, and capable of bearing some of the common cathartics, the exhibition of which is followed by dark bilious stools.

"From having so much duty at present, I am sorry I cannot enlarge upon this topic; but have only to mention my full confidence of bleeding in Europeans. The result is most striking in our hospital, as it in every case lessens the irritation of the stomach, one of the most dangerous symptoms in this disease. Bleeding has been tried on the native attendants with the same good success.

"As every epidemic, by accumulation of subject, has a tendency to propagate its virus, I am cautious in reporting this disease not infectious. Almost every attendant in the hospital, in the short space of six days, has had the disease;—there are about thirty attendants in hospital.

"The regiment is about 800 strong. The admissions from the regiment bear no proportion to the attendants who have been taken sick. The mercurial influence in a small degree does not guard the patient from attack, as has been clearly proved in our wards; full mercurial influence might prevent it."

"*Seroor*, 10*th August* 1818.

"As dissections of cases of cholera morbus were not sent you along with my statement of the 28th ult. I beg to send you a few remarks on this subject.

"As congestion has been found in all our former fatal cases, I yesterday had another demonstrative instance of the eligibility of bleeding in cholera.

"John Stokes, of the 65th regiment, a man recovered from chronic syphilis, was attacked in our wards with vomiting and purging at eight P.M. of the 8th inst. When seen, his hands and feet were cold, with some rigidity. Under these circumstances, and he being of a weakly habit, bleeding (I may say unfortunately) was not used. The usual remedies, with the hot bath, were tried. He died on the 9th inst. at two P. M.

"In company with Dr White of the 2d N. I. and Assistant-surgeon O'Reilly, 65th regiment, I opened the body. The liver was found of a dark-colour, distended with blood, and the gall-bladder full of bile. The spleen of an extremely blue colour. The omentum inflamed, and veins filled in every part. The small arteries of the intestines of a lively red; and the colon contracted through its length to the size of a middle finger, and its calibre so small as hardly to allow a scalpel handle to be introduced.

"The veins of the stomach more particularly arrested our attention. On the great curvature, they were of an intermediate size, between a crow's and a common quill. These turgid veins were more apparent internally, and the most forcible injection could not have more completely filled the vessels. The mesenteric vessels, as well as the vessels of every other internal membrane, partook of this appearance of formerly increased action. The lungs were dark, and suffused with

blood; this, most probably, is the cause of the stertorous and laboured breathing present in almost every fatal case.

"From former dissections, and the appearances in this case, little doubt ought to arise regarding the exigence of bleeding in almost every case, but more especially in the first hours of attack. If even during the cold and rigid state of the limbs, should the pulse rise in the hot bath, which it generally does, we ought not to hesitate in opening a vein; as recovery from this stage is most precarious, and every experiment may therefore be tried.

"As dissection in this disease has shown, and will in every case show, turgidity, if not inflammation, of the vessels of the internal parts, no hesitation as to what line of practice is best should harbour in the minds of medical men during the prevalence of so dreadful a disease.

"Under this idea of increase of action internally, and consequent want of balance in the circulation, from which arises the coldness and shrinking of the external parts, I commenced the bleeding system; and of the cases admitted of cholera, since the 21st ultimo, up to the 10th August, the casualties run thus,

Bled, -	88	Dead,	2
Not Bled,	12	Dead,	8
Total admissions,	100	Deaths,	10

"Our cases of dysentery in the chronic stage in the hospital have been aggravated in many instances, appearing as if the epidemic gave a peculiar character of symptoms to the usual endemial diseases.

"Relapses of cholera have not been unfrequent, and the regularity of the bowels must be strictly attended to in the stages of convalescence.

"Some of these relapses require the same treatment as the original attacks. In one European woman the attack proved fatal."

We have been so liberal in our quotations, that we have only room to add, that to the report of the Board are added all the documents upon which it is founded, and which do great credit to our professional brethren in the East, and to several of the military gentlemen, who have shown themselves accurate observers, and unremitting in their exertions to alleviate human misery.

"In conclusion, we shall only add, that, whatever place may hereafter be assigned to this disease in nosological arrangement, we cannot help thinking that its present appellation of Cholera must be discontinued. If true cholera morbus be, as we have been taught by nosologists to conclude, a morbid flow of bile, the present disease surely cannot be ranked with it; and we agree entirely with Sydenham, (if the quotation we have formerly made from him be allowed to be applicable to our present purpose,) that though possessing many symptoms in common, the diseases are yet *toto cœlo* of a different nature. "Quisquis autem *cholera morbi legitimi* phænomena studiose collegerit, fatebitur morbum istum, quamvis eorundem symptomatum nonnullis stipatum, ab hoc nostro toto cœlo distare."—pp. xlii, xliii.

PART III.

MEDICAL INTELLIGENCE.

The anniversary dinner of the Institution for the Benefit of the Widows of the Medical Officers of the Army, founded by Sir James M'Grigor, was held at the Thatched House Tavern, St James's Street, on the 26th of May, Dr Borland, Inspector of Hospitals, in the chair; when one hundred gentlemen sat down to dinner. Among the guests were Dr Latham, President of the College of Physicians; Sir David Dundas, Master of the College of Surgeons; the Master of the Worshipful Company of Apothecaries; Sir Everard Home; Sir Matthew Tierney; Mr Crampton, Surgeon-General of Ireland; Drs Baillie, Cook, Sutton, and Drs Johnson and Beattie of the Royal Navy; Professor Brand; Messrs Wilson, Carpue, Brooks, Brodie, Alexander, &c.

The objects of the Institution, now in its fifth year, having been most fully obtained, payment of the pensions to widows commences in January next. The Society for the Widows of Medical Officers of the Army having succeeded beyond all expectation, it is now in contemplation to establish a subsidiary society for orphans, with a fund for benevolent purposes.

There are now 590 subscribers, (of whom 412 are unmarried,) and the capital stock of the society amounts to L. 17,169, 16s. 7d. 3 per cents. reduced, producing, with the subscriptions, nearly L. 2600 a-year; being an increase, after filling up vacancies by death and otherwise, of 10 members, and of L. 4000 3 per cents. since the last annual meeting.

Extracts from a Letter from a Physician in London to Dr DUNCAN.

1. *The Nerve Operation.*

The operation for cutting out about half or three quarters of an inch of the trunk of the nerve on each side of the leg of the horse continues to be practised with the greatest success. There is nothing lost, but pretty considerable gain, from this practice. The animal is released from the torment he endures every time he is compelled to locomotion, and rendered fit for slow, if not for quick work. The stories circulated of the hoof dropping off, and gangrene of the foot coming on, are the offspring of the *jalousie de metier*. It must be owned, it has been very properly

a question determinable by experience only, whether the nerve should be cut out on each side of the cannon bone, or the principal part of that nerve on each side of the long pastern. The latter mode appears to be all that is necessary; indeed, to do more is likely to do mischief. The bitterest rebuke to the adverse party is, the sum of money voluntarily presented to Mr Sewel, and, at the same time, a handsome augmentation of his salary, by the noblemen and gentlemen, the managers of the Royal Veterinary College, at their last annual meeting.

Red Snow.

You have probably heard that this colour is by some highly ingenious experiments shown to be occasioned by a cryptogamous plant, which possesses some properties of animal matter, particularly in containing globular particles, like blood, pus, &c.; also the residuary matter of the evaporated water from the red snow was made to vegetate, producing the asserted cryptogamous plant.

2. *Mildew of Wheat.*

This injurious effect on corn is, you know, believed to be occasioned by a parasite plant. A well known ingenious veteran in science has communicated to the Board of Agriculture a very cheap, simple, and efficacious mode of destroying it, namely, by a common labourer sprinkling salted water upon the ears of the wheat, which can be done to the extent of eight to ten acres a day.

3. *Cows poisoned by the external Application of Tobacco and Corrosive Sublimate.*

For the mange in five cows of Mr Hatchett, a man, vulgarly called a beast-leech or cow-doctor, applied a preparation containing these two substances. In the course of one hour and a quarter, they all died, preceded by convulsions. The facts were proven, on an action against this doctor, to the satisfaction of the jury, who awarded the damages. An experiment has been subsequently made by an intelligent medical practitioner on the diseases of dogs, in which six grains of shag tobacco, infused in about one drachm of water, being applied to the skin of a dog, presently killed the animal. It is, however, well known that dogs are very commonly washed with tobacco water for the mange, without poisoning them; but I have known it occasion long continued nausea, vomiting, purging, and discharge of urine. Probably, however, it requires a concentrated solution of tobacco to prove destructive to life. The same observation is made on the effects of corrosive sublimate and tobacco in the case of Mr Hatchett's cows. Probably, too, these applications may have occasionally produced death, but the cases were unnoticed. It is also questionable, whether the tobacco or corrosive poisoned the cows, or the two conjointly. Tobacco does not kill horses, for it is very commonly eaten with corn, to increase the appetite, nor do very large doses of corrosive sublimate taken internally poison them.

4. *Mercury in the Syphilis.*

It must not be supposed that the most judicious practitioners have disused mercury in the venereal disease: it is still used in reality

more limitedly. They still find either that they cannot cure venereal sores and other venereal cases without this drug, or that the cure is accelerated by it. The necessary time for the intervention of mercury requires more knowledge and judgment than the greater part of practitioners possess; hence the very frequent, unnecessary, and injurious use of this article. Certainly the lately made observations of Dr Fergusson, Mr Rose, and others, have already produced an improvement worthy to be designated by the title of an *æra*. The benefit to the community of this limited employment of a drug formerly so profusely and unnecessarily prescribed in the Lock and other hospitals, entitles the authors to the best rewards. These, however, are neglected, while parliamentary remuneration is conferred on the artful and bold pretender, under the auspices of a minister utterly incompetent to judge of medical subjects.

5. Secretion of Pus without Constitutional Disorder.

A man continued his avocation as a gunner for many months with a large swelling among the muscles of the upper arm. He was in perfect health. On arriving in town from Hastings to transact business, he casually called upon me to show the swelling. Except for the weight, he felt no inconvenience from the swelling. It was doubtful of what it consisted. On puncturing it, I believe nearly a pint of pus was discharged. The discharge gradually ceased; and, in six weeks, the patient informed me he had got well of the abscess, and continued in the best health. In other cases, it is well known that a similar abscess is attended with much constitutional disorder, even hectic fever, an ulcer, and finally death. I fear we have little control over those states of the constitution on which depend such different effects from the similar local diseases.

6. Sarsaparilla.

They who believe that this article possesses great medical virtues will feel interested on hearing that Mr Battley has bestowed much successful labour in improving the preparations of it. Mr Battley asserts, from experiments, that the medical virtue of sarsaparilla "resides exclusively in the cortical part, and that such virtues may be disengaged by infusion in cold water. The root, thus treated, becomes a tasteless and inert substance; and it follows, that, when the cortical part has been injured, or when, in the preparation of the medicine, the ligneous part of the root has been chiefly regarded, the remedy so prepared must be in a great measure, if not wholly, inefficacious. Various modes of improving on the simple infusion will readily suggest themselves; and I find an elegant and efficacious preparation is, infusing the entire root in lime-water."

Extract from a Letter from Dr SANDERS, *Lecturer on the Practice of Physic, Edinburgh, to Dr* DUNCAN, *junior.*

It will not, I trust, be unacceptable to you to know precisely the results of my anatomical inquiries on Tetanus,—results, indeed, connected with the whole tribe of spasmodic diseases.

Professional avocations do not allow me, at present, to enter into any elaborate detail or discussion; permit me, therefore, to state briefly the general facts.

1. If any muscle, voluntary or involuntary, is affected with spasm, and, during this affection, the person dies, on examination it is found, that the nerves, which supply the spasmed muscle, are covered with turgid red vessels at their visible origins, or where they appear to set off from the brain, medulla oblongata, or spinal marrow.

This turgescence, and the effects of turgescence, are in the ratio of the degree and duration conjointly of the spasm or convulsion.

The turgid vessels, in every obstinate and severe case, may be traced into the substance of the spinal marrow, by the sides of the striæ, which seem to be the continuations of the nervous filaments; as also along the nervous cords, through their sheaths formed in the dura mater.

The position of the body after death has no appreciable influence on these appearances: they are observed anteriorly, or posteriorly, in the loins, thorax, cervix, or within the skull, bearing strict relation to the parts which have evinced spasmodic action.

But the nerves serving the muscles which have not laboured under spasm or convulsion, are free from turgid vessels.

2. If the tetanic affection is confined to the jaws, certain nerves arising from the tuber annulare and medulla oblongata are found in the state above described.

But if the tetanic affection involves the whole inferior extremities, and the trunk of the body, as well as the jaws, then the origins of the nerves from the *tuber annulare* to the *cauda equina* are covered with turgid red vessels.

In short, the nerves exhibiting such turgescence at their origins, correspond in number and situation with the muscles which have exhibited inordinate contraction; I have conducted this investigation for about sixteen years, and have not met with one exception.

Some are of opinion, that I maintain, that the spinal marrow, its nerves, and membranes, are always affected with turgid vessels in tetanus: this is incorrect. I have examined cases of trismus, in which the spinal marrow, its membranes, and nerves, were almost entirely sound, from the atlas to the lumbar vertebræ; in these instances, however, not only the origins of the nerves at the medulla oblongata, but the medulla itself, was inclosed with a close net-work of turgid red vessels.

There are many other appearances within the cranium and spinal canal more or less connected with spasms and convulsions; but those, which I have here related, are uniform, and accordingly constitute, we have reason to believe, an essential part of these diseases.

Morbid changes in the organization, or substance of the brain, and spinal marrow, or in their envelopes, belong to another order of maladies, and when present in those affected with spasms, the symptoms always indicate complication.

If you deem this communication deserving, let it have a place in the Journal.

Edinburgh, 8th May 1820.

Extract of a Letter from EBENEZER CLARKSON, *Esq. Surgeon in Selkirk, to Dr* ABERCROMBIE, *on a remarkable Affection of the Intestinal Canal.*

In compliance with your request, I now attempt to narrate the particulars of the case I mentioned to you of obstructed bowels, in which I had found the use of galvanism so efficacious in its removal. It was on the 25th of January last that I was called to visit a gentleman in this neighbourhood, about 50 years of age; he had formerly been under my care more than once, for dyspepsia, &c. &c. He now complained of great sickness at stomach, vomiting, with pain in the right side, immediately under the liver; he shrunk from the touch of it; it felt hard and circumscribed, about the size of a crown piece; in my absence an opiate and dose of castor oil had been administered, with little relief, though the oil had procured repeated evacuations. I suspected some obstinate obstruction in some part of the intestine; for though he denied having neglected his bowels, having his usual calls, yet I had so often found this to be a fallacious test, and from his extreme sickness at stomach, foul tongue, the fixed pain, and pulse 120, I immediately gave him five grains of calomel, combined with three grains of the antimonial tartar. In about an hour he vomited freely a great quantity of viscid phlegm, and, in the course of the night, had three copious stools of dark-coloured hardened feces. He felt much relieved; pulse considerably fallen, but still complained of pain in the side, and it was still painful to the touch; repeated and increased doses of calomel, castor oil, and other active purgatives, were had recourse to, without much effect; fomentations and repeated anodynes produced merely momentary relief; his pulse, though quick, never indicated the propriety of abstracting blood, which, from an acquaintance with his constitution, I was induced to avoid; I therefore continued the use of purgatives, and he took doses of 6, 10, 15, and even 20 grains of calomel every four hours, without much effect on his bowels, till aided by repeated and strong injections. I hesitated about trying the tobacco injection, from a dread of the sickness I have seen it produce. This mode of treatment was, with little variety, continued for a fortnight. I repeatedly spoke of blistering the abdomen, but this he had a great dislike to; in short, the obstinacy of the case somewhat alarmed me, and having read of the wonderful effects of galvanism in somewhat similar cases, by Mons. le Beaume, &c. I determined to try its effects with a trough of about 50 pair of plates of about two inches broad and deep. (I at first used the acid to fill it, and touching the skin where it was to be applied with it, but afterwards gave the preference to salt water.) I began by applying the knobs all around the hardened and pained part, he not bearing the touch on the hard part; but after using it for from twenty minutes to half an hour at a time, twice a-day, he bore it without complaining, in two

days. In short, every application gave more and more relief, and in ten days it was entirely discontinued, the hardness and pain being completely gone, and his evacuations becoming perfectly natural. After continuing for several days to discharge much black hardened feces, he gradually recovered his strength and appetite, and has ever since enjoyed better health, and more natural state of bowels than for some years past.

The above case has given me a high idea of the value of galvanism, as a most active, useful agent, and I shall be happy to find that in your extensive practice you find it confirmed.

Observations by Dr ABERCROMBIE.

To Mr Clarkson's very distinct account of this important case, I beg leave to add one circumstance, communicated to me by Mr J. Clarkson his son, who took charge of applying the galvanism. He states, that, after the application had been made for a few minutes, there usually (if not always) commenced a commotion of the bowels, with a rumbling noise, and that this was followed, after a certain time, by a full evacuation. This evacuation sometimes did not take place until after the galvanism had been continued for the usual time, (about twenty minutes,) but at other times, the call became so urgent during the application, as to oblige him to suspend it, and allow the patient to retire. The case is extremely interesting, and calls our attention to an agent hitherto little attended to in affections of this nature. May I be allowed to refer to its accordance with certain conjectures which I have hazarded on the pathology of the intestinal canal? The whole phenomena of the case seem to give considerable reason to believe that the principal seat of the disease was the part in the right side which was tense and painful; that there a portion of the intestines was in a state of over distention and inaction; that the galvanism acted on this part by restoring its muscular action; and that the canal then recovered its healthy relations. The immediate effect of the galvanism in producing evacuation of the bowels, as noticed by Mr Clarkson, junior, is particularly worthy of attention. I do not see how it can be accounted for on any other principle.

Observations on Diversity of Position in the Colon. By JOHN YELLOLY, *M. D. F. R. S. Physician to his Royal Highness the Duke of Gloucester, and late Physician to the London Hospital.*

IN examining bodies, it is not unusual to find some variations in the position of the colon. These variations generally occur in its arch, or at the termination of its sigmoid flexure. In the former case the intestine, after quitting the liver, descends for some distance, in more or less of an oblique direction, across the abdomen, making a turn up to the spleen, and then holding its usual course in the left side. This is the most common variety; but sometimes the descent

from the liver goes on even to a little below the anterior and superior spinous process of the left ilium, from whence the gut ascends perpendicularly up to the spleen, and doubles again, to form the commencement of the sigmoid flexure.

When the deviation is at the lower extremity of the sigmoid flexure, the colon, instead of at once descending into the pelvis, to terminate in the rectum, stretches previously some way across the abdomen, in the hypogastric or umbilical region, from whence it doubles back to take its proper course.

Though these varieties of position in the colon must occasionally have been noticed by gentlemen, who are much in the habit of morbid dissection, I consider it important to direct the attention of the profession to the subject, from the circumstance, that M. Esquirol, the able physician to the Salpetriere at Paris, is disposed to consider displacements of the colon (of which he describes several varieties) as being, in some degree, connected with insanity; inasmuch as he has had occasion very frequently to observe them, in examining the bodies of the insane. *

It is particularly gratifying to the medical world, that a man of talents, like M. Esquirol, should employ the rare advantages of his official situation, in investigating, by dissection, the physical characters of insanity: and I have no doubt of the benefits which he will thus be enabled to confer on the profession. I would venture, however, to remark, that in morbid anatomy, it is of the utmost importance to discriminate, accurately, between natural and diseased appearances, and that the evidence which M. Esquirol brings forward, as connecting variations of position in the colon, with derangement of mind, can scarcely be regarded as conclusive, unless the comparative frequency of such occurrences, in subjects not affected with insanity, is carefully appreciated.

M. Esquirol observes, that he is not aware of any author having noticed such displacements of the colon as he describes. It must, therefore, have escaped his observation, that Morgagni gives several examples of diversity in the course of that intestine, most of which are in its transverse portion; † and that such cases were likewise not unknown to Haller ‡ and Sœemmering. § Haller, in

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* Cependant on trouve tres souvent, dans les cadavres des alienés, cet intestine deplacé. Tantot sa direction est oblique, tantot elle est perpendiculaire, en sorte que son extremité gauche se porte derrière le pubis. Quelquefois le colon transverse descend en forme d'arc, au dessous du pubis, et jusque dans la cavité pelvienne, &c.

Observations sur le deplacement du colon transverse dans l'alienation mentale; et suite des observations, &c. par M. Esquirol. Journal Géneral de Medicine Française et Etrangere, ou Recueil Periodique, &c. pour Mai et Juin, 1818.

† Morgagni, De Sedibus et Causis Morborum. Epist. Anat. Med. 4. Art. 16, 26, and 30; 17, 25; 19, 19; 20, 16; 21, 33, and 35; 29, 12; 43, 22, 48, 38; 52, 2: 57, 2; 59, 12; 70, 7; 62, 5.

‡ Haller's Elementa Physiologiæ, Lib. 24, sect. 13, 14, 15.

§ Sœmmering, De Corporis Humani Fabrica, Tom. VI. p. 313.

addition to the varieties which I have mentioned, has seen the colon run between the liver and the stomach, and thus press down the latter. He also describes the arch of that intestine as, in various cases, making two or three perpendicular or transverse doublings, and as sometimes ascending up to the spleen, in an undulating form, from the lower part of the abdomen on the right side, to which place it had descended from the liver.

In none of the instances in which such varieties have come within my own observation, has there been any tendency to aberration of mind. They mostly occurred in the London hospitals, which do not admit persons affected with insanity. Of Morgagni's cases, one only exhibited anything like mental derangement; and Mr Lawrence of Bartholomew's Hospital, who has been for many years surgeon to Bethlem, tells me, that he does not remember having seen any deviation from the usual course of the colon, in the bodies of insane persons whom he has examined, but that he has several times noticed that kind of variety in those who have died sane. I may likewise observe, that Mr Dalrymple of Norwich, who has been surgeon to the Norfolk Lunatic Asylum ever since its establishment in 1814, has not remarked more than one example of any material deviation in the position of the colon, out of 37 cases which he has examined, of persons who have died in that institution.

The late Dr Wells communicated to the "Transactions of the Society for the Improvement of Medical and Chirurgical Knowledge" * the case of a gentleman, who had been long subject to various abdominal complaints, in whom the colon was found to descend perpendicularly from the liver, on the front of the intestines, nearly as far as the pubes, and to return in a parallel direction, to the usual height of the arch, from whence it proceeded to the rectum in its ordinary course. This irregularity, Dr Wells was disposed to regard as the effect of disease; but I am inclined to doubt, whether the deviation described by him, or any of the principal varieties mentioned in this paper, can be properly viewed as the result of anything but natural conformation. It is true, that a descent or displacement of the stomach, from pressure of an enlarged liver, or other neighbouring viscus, will carry the colon along with it, and therefore give to the latter a lower than usual position; and that the same effect may, to a certain degree, be produced, by a simple enlargement of the stomach, and a consequent depression of its greater curvature. But when we consider, that the varieties which I have noticed must generally be connected either with an unusual fulness of the mesocolon, a slight change in the position of that organ, or an augmented length of the intestine itself, and moreover, that in such cases of deviation, the intestine is very generally in a healthy state, there appears to me no sufficient reason for attributing such diversities to the effects of disease.

Carrow Abbey, Norwich, May 20th 1820.

* Vol. III. p. 156.

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PART I.

ORIGINAL COMMUNICATIONS.

I.

Exposition of the Present State of the Profession of Physic in England, and of the Laws enacted for its Government.

IMPRESSED with a deep conviction of the important advantages which result from free discussion, I am induced to trespass once more on your indulgence, while I lay before my professional brethren some further views of the medical profession which appear to me to claim their serious attention. In your Number for January 1818, I endeavoured (and I trust not wholly without success) to deduce from the history and progress of the profession, some of those principles which should guide the legislature in regulating it as a political department. In that essay, I endeavoured to shew the natural connection that subsists

* To prevent the interruption of frequent references, a general one is here given to the following authorities, viz. "The Royal College of Physicians of London, founded and established by law, &c. &c. by Charles Goodale, Doctor in Physic, and Fellow of the said College of Physicians. London, 1684." "The Statutes of the Colledge of Physicians, London, worthy to be perused of all men, but more especially Physicians, Lawyers, Apothecaries, and Surgeons, &c. 1693." "A General View of the Establishment of Physic as a science in England, by the Incorporation of the College of Physicians, London, &c., by Samuel Ferris, M. D. &c. 1795." "A Letter to the Right Honourable Lloyd Lord Kenyon, &c. by Will. Ch. Wells, M. D. London, 1799." "The Law of Physicians, Surgeons, and Apothecaries, &c. London, 1767."

between the several branches of the profession,—to trace their artificial separation to the causes by which a disunion was effected,—and to suggest such arrangements of the general profession as would best adapt its several powers to the wants of society, and direct its combined energies for the public good. These views, however just and incontrovertible, are yet too comprehensive I fear, and too likely to jar with the various discordant interests which this ill-fated profession unhappily comprises, to afford any hope of their being speedily acted on, or indeed of their finding many minds sufficiently free from prejudice, even to admit their truth. In order, then, to open any prospect of amendment, it becomes necessary to pursue the subject more in detail, and, by an exposure of specific grievances, to prepare the way for those temperate reformations which the legislature, when convinced of their necessity, may have no reluctance to apply. In the present tract, I mean to review more closely and circumstantially the department of physic as it exists in England,—to trace the successive enactments by which its legal condition has been regulated,—to shew how these several laws have been administered,—to display the effects of their mal-administration,—to manifest their utter unsuitableness (even if faithfully and conscientiously administered) to those revolutions in the state of medical science and practice, and of society, which the lapse of three centuries has effected,—and, finally, to suggest to those who are most aggrieved by the existing evils, those rational and constitutional courses by which they can bring their peculiar hardships under the cognizance of the legislature, and thus obtain that redress which a British senate will never withhold from well-founded complaints, when temperately urged, and respectfully laid before them.

The first legislative enactment for regulating the profession of physic in England was the 3d Hen. VIII. c. 11, (1511.) This ordains that no person shall practise as a physician or surgeon in London, unless examined and licensed by the Bishop of London, or Dean of St Paul's, "calling to him or them four Doctors of Physic, and for surgery, other expert persons in that faculty," on penalty of five pounds a month; or in the provinces, unless examined and licensed by the Bishop of the diocese, or his vicar-general, either of them "calling to them such expert persons in the said faculties as their discretion shall think convenient," on similar penalties. Considering the period when this law was enacted, and the circumstances to which its provisions were intended to apply, it is difficult to conceive any measure better calculated for accomplishing the objects in view; and it is much to be doubted whether its operation

would not have been, eventually, more salutary and effectual than that of the royal charter, and its confirmatory statutes, by which this law was virtually superseded. At this time there existed no medical school in Britain, and physicians were consequently compelled to resort to the medical schools of the Continent for their professional education. This course of education being necessarily expensive, the supply of well educated physicians was consequently limited, and thus deficiencies of medical aid were felt which could only be supplied by practitioners of inferior quality. The multiplication of these latter, and their notorious incapacity, called forth, with great propriety, the interference of the legislature, whose provision for remedying the evil is marked by discriminating judgment and sound policy. By it the ability of candidates for medical or surgical practice was required to be proved by the examination of regular physicians, or experienced surgeons, under the personal superintendence of a high ecclesiastical dignitary. By this expedient, the competency of the candidate was tried by the best test which the nature of the case admitted, while the integrity of the examiners was ensured by their subordination to an unprofessional, enlightened, and disinterested president, who had full power to shield the candidate from any harshness or unfairness to which professional jealousy, acting on the weakness of humanity, might give rise. In the tenth year of Henry VIII., (1518,) the London College of Physicians was incorporated by royal charter, which received a legislative confirmation by the 14th and 15th Henry VIII. c. 5, (1522.) And again by the 1st Mary, sess. 2, c. 9, (1533.) Charters were subsequently obtained by this college both from James I. and Charles II.; but, as these were never confirmed by statute, they could not supersede the law as established by the statutes of Henry and of Mary.

The charter of Henry VIII., then, with its confirmatory statutes, being the only legal ground by which the authority and privileges of the London College of Physicians are supported, it becomes necessary to scrutinize their provisions somewhat closely, in order to ascertain how far they sanction the several proceedings to which this college has resorted under them. If it shall appear that the college has greatly exceeded the powers confided to it by the legislature,—that it has substituted, for the clear and express provisions of the charter, its own arbitrary decrees, promulgated under the denomination of bye-laws,—that by so doing it has infringed the chartered rights of individuals, and inflicted signal injury on the profession, for whose protection and advancement it was itself created;—if these things shall be proved, (and I trust, ere the present essay closes, to establish

them beyond a doubt,) sufficient ground will surely be shewn for calling on the legislature to inquire into abuses so deeply laid, and so extensively injurious, and to correct them either by reforming the illegal practices of the college, or by placing the profession under some more salutary guidance and control. The charter of Henry VIII. is a simple charter of incorporation, uniting in one community or college (unum corpus et communitas perpetua, *sive* collegium perpetuum) certain individuals named in the charter, together with all others of the same faculty then resident in London. It empowers the college to elect an annual president, to have perpetual succession, and a common seal, to possess lands, &c. granting all such rights and privileges as are usually given to corporate bodies. It decrees that no one shall practise physic in London thenceforward, unless authorized by the college, under penalty of L. 5 for every month during which such unlicensed practice shall be continued. The chief provisions of the 14th and 15th Henry VIII., by which this charter is confirmed and enlarged, consist in extending the elects, or board of examiners, from four to eight, and in ordaining that no one shall practise physic throughout England, unless examined and licensed by the president and elects of the London college; thus virtually revoking the 3d Henry VIII.

It is curious and interesting to remark how tardy was the compliance with this statute in the provinces, for we find that the bishops continued to grant licences in the provinces for above 150 years after, a circular letter having been addressed by the college to the several bishops in their respective dioceses, so late as 1686-7, admonishing them of this power having been exclusively vested in the college by the 14th and 15th Henry VIII.

The obvious interest and meaning of the charter and statute of Henry were, that all men examined and admitted under them should become members of the body corporate. No distinction whatever is specified, or even alluded to, either in the charter or statute, and, consequently, there is no legal ground for confining the privileges of the college to any particular class of physicians, nor for establishing any gradation of its members. On the contrary, it was the bounden duty of the college to examine all men who sought admission; and when proved as to their qualifications and competency, to admit them to a full participation of the rights and privileges conferred by the charter. Far different, however, has been the conduct of the college, for, by means of distinctions and gradations of rank, which have no place in the charter, and for which it gives no sanction whatever, they have effectually narrowed the college so as to exclude

from its pale a large portion of those physicians who ought to partake fully of all its rights and privileges.

Without tracing their progress through the lapse of centuries during which they have exercised powers usurped and illegal, it will suffice to specify the gradation of members, as announced in the printed lists of the present day, in order to shew how unsupported such complicated arrangements are by the simple provisions of the incorporating charter.

The list, as at present published, comprises "Fellows," "Candidates," "Inceptor Candidates," "Licentiates," and "Extra Licentiates,"—of which several classes it is necessary to specify the distinctions. The "Fellows" are in fact the body corporate, engrossing to themselves, by a palpable usurpation, the whole power and authority of the college. To this rank none are now elected save medical graduates of Oxford or Cambridge; a limitation which rests on no authority but that of the bye-laws of the college, and which directly contravenes the express provisions of the charter. "Candidates" are those who are subjected to a certain probation previously to being elected Fellows. "Inceptor Candidates" are, as the denomination implies, in an earlier stage of their noviciate. "Licentiates" are merely permitted to practise, being deemed unworthy of becoming members of the corporation from not having graduated at Oxford or Cambridge, from which circumstance alone their ineligibility is inferred, for they are not even suffered to evince their learning and competency by any tests, all examination for the fellowship being absolutely refused, even though the college have the power of conducting it in any manner, and with any degree of severity they think proper. The "Extra Licentiates" receive permission to practise in the provinces, but are prohibited from coming within seven miles of London.

In addition to these several ranks, that of "Honorary Fellows" was once created; but it was soon suppressed, in consequence, as the college records themselves declare, of the disputes within the college, to which this attempt to enlarge its boundaries gave rise.

A more particular description of these several ranks may here be desirable, as more clearly explaining their nature, and thereby elucidating better the policy by which the college has been actuated in ordaining them. The following are taken from "A Short Account of the Institution and Nature of the Colledge of Physicians of London," which appears to have been published by the college in their own vindication, against some alleged charges so early as 1688, and which is quoted in another book published in 1693, entitled, The Statutes of the Colledge

of Physicians, &c. The quotation is as follows: "The College of Physicians in London, being constituted of men of generous and liberal education, and instituted for public benefit, *out of which no person of sufficient capacity and learning can be excluded*, consists of a President, Fellows, Candidates, Honorary Fellows, and Licentiates. 1. Fellows are Doctors of Physic chosen out of the candidates, who have been always limited to a certain number, (formerly forty,) and are now confined to the number of fourscore, by his present Majesty's gracious charter. 2. Candidates must be Doctors in Physic, admitted to that degree in one of our Universities, must not be foreigners, and ought to have practised four years before they are admitted into that order. 3. Honorary Fellows are such Doctors of Physic as, by reason of their being foreigners, or having taken their degree in some university beyond seas, are not incorporated in either of ours; or, for some reason, (having not been candidates,) are not of the number of those who have votes in the affairs of the college. 4. Licentiates are such other *persons* skilled in physic who, by reason of their being foreigners, or their not being admitted doctors in one of our universities, or for their not being eminently learned, or by reason of their too great youth, or such like causes, are not capable to be elected into the number of candidates, yet may, notwithstanding, be serviceable to the public in taking care of the health of the king's subjects, *at least in some diseases*." * Will it be credited that this last degraded class only is open to the great body of physicians, who, however highly educated, or abounding in medical knowledge, obtained by assiduous study, in the most eminent schools of physic, are yet pronounced unworthy of admission into the college, nor from any incompetency being proved, but from their not being medical graduates of universities in which no competent schools of physic are to be found! A sense of the indecency of such exclusion seems for a moment to have influenced the college in creating a class of Honorary Fellows; but the bye-law ordaining it seems to have speedily sunk into disuse, for in 1720 we find, that, at a meeting of the college, "it was proposed to consider

* The bye-law of the college conveys the indignity offered to the Licentiates still more strongly. "De permissis, sive Licentiatis ad praxin. Quoniam complures in hac civitate medicinam faciunt, quos *inidoneos omnino* censemus ut in numerum sociorum aut candidatorum adoptentur, vel quod natione non sint Britanni, vel doctoratus gradum non adepti fuerint, *vel non satis docti*, aut ætate et gravitate provecti sint, vel alias consimiles ob causas, et tamen rei publicæ inservire et salute hominum prodesse possint, *saltem in nonnullis curationibus*; de his ordinamus et statuimus, ut post examinationes debitas, et approbationem præsidis et censorum permittantur ad praxin, *quamdiu se bene gesserint*."

the statute relating to Honorary Fellows, in order to admit such as have had a regular education in foreign universities into the order, and distinguish them from the Licentiates who had no degrees;" which subject was referred to the president and censors for their report. In June 1721, a statute, or bye-law, to this effect, was read a first time, and agreed to *nem. con.* In September 1721, it was read a second time, approved, and had the seal of the college affixed it. How such a statute could give rise to contentions it is not easy to conceive. Wanton arrogance alone could object to this trivial distinction being conferred on men regularly educated, and already possessed of university honours; for it is to be remarked, that it was purely honorary, no vote nor any power of government being attached. Yet, in December 1725, on the very 25th, (if my authority be correct,) a day one should think calculated to inspire kindlier feelings, we find the bye-law repealed on the following proposition of the president: "The president, *having taken notice of the disputes that had been occasioned by the statute relating to Honorary Fellows*, did, *for preventing further disputes*, propose, in the following manner, That the statute relating to Honorary Fellows should be now repealed a first time, which was unanimously agreed to." The proposal for repeal was made a second time in January 1726, and again in the April following, when the repeal was rendered complete. These statements may serve to shew the principles on which the administration of this college has been conducted from the earliest periods. My object in entering into such details now is, not to criminate the college, who may have been influenced by erroneous judgments rather than corrupt principles, and who might possibly have considered themselves as really benefiting the community by the assumed exercise of authorities which their charter did not confer; but for the purpose of substantiating the fact of such exercise of power being in direct contravention of the plan and obvious provisions of the charter.

For the variety of distinctions that have been specified, the college can shew no authority whatever save that of their own bye-laws. Now, it is indisputable that the general power of framing bye-laws under any charter, is given always in subservieney to the provisions of the charter itself, and that such bye-laws can in nowise contravene the charter without a violation of law.

Yet, that the bye-laws by which the present organization of the London college has been accomplished do directly contravene the charter of Henry VIII., by denying admission, or even the opportunity of examination, to those to whom the charter

explicitly gives the right, is too clear, from the few facts already stated, to need the support of any elaborate argumentation. Lest it should be supposed that this charge of illegality in their proceeding is generated by spleen, or the grounds of it raked out among musty records and obsolete usages, I shall here briefly state some opinions respecting their bye-laws, which have been pronounced from time to time by high legal authorities, and even by numbers of their own fellows. And, first, as an illustration of the policy of the college, and of the expedients by which they substituted their own arbitrary dictation for the law of the land, I shall report an extraordinary case which was published near 150 years ago.

It is entitled "The Base, Dishonourable, and Illegal Dealing of the College of Physicians, London, with a Doctor of Physic admitted to that degree in one of our own universities, who in July, August, and September 1683, presented himself to the President and Censors to be examined,"—"and was by them examined three several times in Latine, according to the form of the statutes in that case provided; and was approved, and had leave given by the President and Censors after examination to visit the Fellows,—and did accordingly visit all the Fellows, in order to be admitted Licentiate; and at the same time was requested and desired by them in behalf of the whole college, and withal complemented, how extremely he should oblidge and highly honour that society, if he would be pleased to suspend his admission as Licentiate, (and which they confest they could not deny,) till such time as he had quitted his employment in pharmacy, and compleated his degree (being then batchelor of physic) of Doctor in the university; and that then without any farther trouble of visiting the Fellows, or other examinations, and for the very same fees, by vertue of these examinations standing registered in their books, he might be admitted a *candidate*, the more honourable station in their society," &c. "On these considerations he submitted to and granted their request. Four years now elapsed, and by their advice, having regularly completed his degree of Doctor in Physic, performing all exercises required by the University of Cambridge, as his deploma to them shows, and the register in the university will sufficiently testify; he applied himself to the then president of the college in the year 1687, for his admission, (as formerly directed and promised by the president and censors, in behalf of the whole college, in the year 1683,) from whom he had a courteous reception and acknowledgement, that it was all the reason and justice in the world that he should have his admission; besides, saith he, we cannot deny it him, and then advised him to wait till next college-day,

and there give his attendance; which he accordingly did, and was then deferred to another opportunity, by reason the college was then engaged in private business, and no public business would at that time be entered on; he attended again and again, and was still deferred. During these delays the private business is effected, and the new statutes of exclusion are made and promulgated in the theatre, September 28, 1687. After these new statutes were made, he was advised to wait on the President and Censors on a private college-day, to demand his admission, and did accordingly; and had for answer from them their new statutes, which Mr Register would needs read: To this he answered, these statutes cannot relate to my case, being made above four years since the desires, requests, and directions of this Board, in behalf of the whole college, were made to me, to suspend my admission till I had completed my degree of doctor; besides, I have lately attended several times on the college for my admission in July, August, and September 1687, since I was Doctor in Physic, and before these statutes were made and promulgated. However, so it was, that unless he would abjure the company of apothecaries, (as well as he had by their advice and directions quitted his employment in pharmacy in the year 1684,) and bring it attested under the hand, or by the person of a public notary, that he had relinquished and abjured that society, he should not be admitted."

I have been tempted to give this statement at full length, as no abridgment could do justice to it. The conduct pursued by the college I shall not attempt to characterize,—observing that I seek in vain to recognise that "sanctuary of honour and good faith," which this college was pronounced to be by the late Lord Kenyon, when, on the ground of this reputed honour and good faith, his Lordship thought fit to refuse Dr Stanger's application to the Court of King's Bench for a mandamus, to admit him to examination for the fellowship. To this refusal I shall have occasion to advert by and by; in the mean time, I shall only remark on the case just detailed,—that however opinions may differ on the abstract propriety of the exclusions pronounced by the college bye-law, no doubt can be entertained of their being contrary to law.

These proceedings of the college were probably not carried without much internal contention; for, at this time we find the sentiments of the fellows so divided, that, in 1702, thirteen fellows of the college, among whom were Sir Richard Blackmore, Dr Tancred Robinson, Dr Tyson, &c. remonstrated with the college upon the rigour and illiberality of their bye-laws. They accused them "by narrowing their bottom, of

keeping many worthy practitioners of physic in the city from entering into their society, whereby *their debts increased without prospect of remedy*, and their body diminished without hope of repair." How determined must have been the spirit of exclusion, which could thus sacrifice even the prosperity of the corporation, and submit to pecuniary embarrassments and increasing debts, rather than consent to open the college doors, which usurpation alone had closed! There is some reason to believe that these embarrassments were felt, and that they gave rise to the expedient of creating "honorary fellows," as a financial resource, the fee of admission as an honorary fellow being fixed at "one hundred pounds of lawful money of Great Britain, besides the usual payments to the president, censors, treasurer, register, and beadle, due according to the statutes, and the necessary expence for a diploma." And here I may cursorily remark, on the extreme hazard of leaving the admission fees of any corporate body unlimited, for the power of extending these indefinitely, enables the corporation virtually to abrogate all the rights of the public to admission, by rendering this unattainable to moderate means, and subjects their cupidity to a temptation which human virtue is not always able to resist.

I proceed now to those legal opinions by which the proceedings of this college have been censured, and their bye-laws pronounced illegal. In 1688 the college was admonished by Lord Chancellor Jeffries. A little prior to the year 1700, a petition was preferred to the Lord Chancellor Somers, and to the judges by several fellows of the college, complaining, "that a prevailing party of the college had combined together in *a fraudulent and surreptitious* manner, and made illegal statutes and bye-laws, and annexed rigorous penalties," &c. In 1768 they were cautioned by Lord Mansfield "against narrowing their grounds of admission so much, that if even a Boerhaave should be resident here, he could not be admitted into their fellowship."

And his lordship said upon the same occasion, "I would recommend it to the college, to take the best advice in reviewing their statutes, and to attend to the design and intention of the Crown and Parliament in their institution. I see a source of great dispute and litigation in them as they now stand; there has not, as it should seem, been due consideration had of the charter, or legal advice taken in forming them;" a hint which he repeated in 1771. The opinions of Lord Mansfield on the illegality of the several gradations and distinctions introduced by the college, are unequivocally expressed in the following declaration: "If it be true," said his lordship, "that there are

some among the licentiates unfit to be received into any society, it is a breach of trust in the college to license persons altogether unfit. It has been said that there are many among the licentiates who would do honour to the college, or any society of which they should be members, by their skill and learning, as well as other valuable and amiable qualities, and that the college themselves, as well as every other body else, are sensible that this is in fact true and undeniable. If this be so, how can any bye-laws which exclude the possibility of admitting such persons into the college, stand with the trust reposed in them, of admitting *all* who are fit? If their bye-laws interfere with their exercising their own judgment, or prevent them from receiving into their body persons known or thought by them to be really fit and qualified, such bye-laws require alteration." And here it may not be unsuitable to notice the danger of leaving corporate bodies the sole judges of the legality of their own bye-laws. The consistency of a bye-law with the paramount authority of a charter or statute, is a question which can oftentimes be decided only by men practised in the subtleties of legal disquisition. Hence, corporations may oftentimes act illegally in the enactment of their bye-laws, from misconception or inadvertence alone, without any corrupt or sinister design. And so liable are men's minds to be warped by their feelings or interests unconsciously to themselves, that I have little doubt of all such abuses originating in an error of judgment. But, again, the tendency of all corporate authorities to assume excess of power is notorious, and requires to be watched with jealous vigilance. It is important, too, to prevent abuses of this kind, which, when they once take place, give rise to extensive injury, the redress of individuals being nearly hopeless, in consequence of that cautious, and no doubt prudent reserve, with which our courts of law receive the complaints of individuals against corporate encroachments.

For these several reasons, I have no doubt that it would prove a salutary and necessary protection to the public, if every bye-law of a corporation which was intended to have continued operation, or which could, in any way, affect the general policy, were, previously to its taking effect, submitted to some high law officer of the Crown, in order to judge of its subserviency to the charter, and sanctioned by his express approval."

In 1768, Lord Mansfield said, "I think that every person of proper education, requisite learning and skill, and possessed of all other due qualifications, is entitled to have a licence; and I think that he ought, if he desires it, to be admitted into the college."

"The power of examining, and of admitting after examination, was not an arbitrary power, but a power coupled with a trust. They are bound to admit every person, whom, upon examination, they think fit to be admitted within the description of the charter, and the act of parliament which confirms it. The person who comes within that description has a right to be admitted into the fellowship. He has a claim to several exemptions, privileges, and advantages attendant upon admission into the fellowship; and not only the candidate himself, if found fit, has a personal right, but the public has also a right to his services, and that not only as a physician, but as a censor, an elect, as an officer in the offices to which he will, upon admission, become eligible."

It has been further remarked by Lord Mansfield, "That licences probably took their rise from that *illegal* bye-law now at an end, which restrained the number of fellows to twenty. This was arbitrary and unjustifiable; they were obliged to admit all such as came within the terms of the charter."

And again, "There can be little doubt that the college are obliged, in conformity to the trust and confidence reposed in them by the Crown and the public, to admit all that are fit, and reject all that are unfit. But their conduct in the exercise of the trust thus committed to them ought to be fair, candid, and unprejudiced, not arbitrary, capricious, or biassed, much less warped by prejudice or personal dislike."

These various opinions, so unequivocally given by the highest legal authority that can be adduced, are surely more than enough to determine the illegality of the college proceedings. The opinions of Judge Aston, however, are too forcible and too directly in point to be omitted. His words are, "With all the inspection I have used, from the first charter to Queen Mary, I cannot find any discinction made between the members of this corporation. How it crept in afterwards might be difficult to account for, but the granting temporary and partial licences will not in my opinion impugn the ancient usage; for we see in different periods a most manifest alteration, and the words quite different in the manner of admission, until about a hundred years ago, they arbitrarily reduced it to a certainty which has since obtained, which, questionless, *owes its foundation to an illegal act of the college itself*, by arrogating a power to admit or refuse, at their own free will. Whereas, they are obliged to admit persons who have proved their abilities, it being for the good of the community." The right of prescription, founded on the antiquity of their own bye-laws, has been much insisted on by the college. This is effectually nullified by Judge

Yates, who observes, "That usage only applies where the construction is doubtful; here the construction is *not* doubtful; if it were, then, indeed, usage for two hundred years might have weight."

These authorities will shew, at least, that the charge of illegality brought against the college procedures is not without foundation. Yet, notwithstanding the reprehension so forcibly expressed, the college still persist in their system of exclusion, confining admission to their fellowship to the medical graduates of Oxford and Cambridge, and arranging all others according to their own arbitrary classification, but excluding them wholly from the pale of the college. It is a matter of notoriety that those universities whose graduates are so peculiarly and exclusively favoured by the London College have never been celebrated as schools of physic, and that their graduates are indebted, for all their essential acquirements, to the medical schools of other universities. In former times, such schools were only to be found in foreign countries, and to them British physicians were accustomed to resort for medical knowledge and degrees. In latter times, several schools of high excellence have been founded in Britain, and in them the great body of British physicians, pursuing naturally and justifiably those courses of education which were most instructive and complete, have long been accustomed to seek those genuine qualifications which were to fit them for a faithful discharge of their professional duties. Yet, by an incongruity which has no parallel, such physicians are punished for pursuing their education in those schools where alone adequate instruction is afforded, by actual exclusion from that corporate body, which was formed for their express protection and support. And to the credit of this numerous and truly respectable body is it, that they have so pursued their studies, and thereby sacrificed personal aggrandisement and private interest to the conscientious attainment of professional competency; for what but a conscientious regard to the real duties of professional life, could lead men to prefer Edinburgh and Glasgow degrees in physic, which require years of resident study, and a scrutinizing examination in medical science, ere degrees are granted, to that of Oxford or Cambridge, in which the courses of medical instruction and examination are little more than nominal, while, by pursuing the former, they lose all hope of attaining those honours, rights, and privileges of the London College, which they who follow the latter exclusively enjoy, and are, moreover, subjected to the insulting arrogance of the college bye-law, which proclaims the inferiority of licentiates to fellows. That such exclusive preference of Oxford and

Cambridge graduates on the part of the college is illegal, and contrary both to the spirit and letter of their charter, admits of no dispute; and it can as little be doubted that it is greatly injurious to all the best interests of medical science. How a system of procedure so illegal and so subversive of the very purposes for which the college was created, could have been suffered to continue for a period of three hundred years, may well excite surprise. It has not been unopposed, however, though unhappily the opposition has been so injudiciously conducted, or so weakly supported, as oftentimes to have yielded a triumph to the college, where defeat, if not reproach, was merited. And here it may not be unmeet to represent the general unfitness of the medical character for engaging in or sustaining contests of this kind. The very nature of his studies makes the student of medicine more fitted for the privacy of his own chamber than for contending in courts of law. His funds, too, are seldom so ample as to allow of his appropriating any part to costly and expensive litigation. The disadvantages under which an individual must ever lie, in contending with a chartered company, are sufficiently formidable; but to the individual physician they are appalling, as he can only pursue his rights at the inevitable sacrifice of time, money, and professional establishment. This latter I hesitate not to include, for it is only in early life that buoyancy of mind is possessed, sufficient to incite men to engage in so arduous a struggle, and what young man, entering on his professional career, and unsupported by established reputation, could hope to bear up under the accumulated obloquy with which so powerful a host of opponents would be sure to overwhelm him? So great, indeed, are the discouragements to entering into this kind of contest, and so unfitted the parties aggrieved for combating in it, that, far from wondering at the general supineness with which the usurpations of the college have been acquiesced in, I am disposed rather to admire that any have been found bold enough to question their authority or impugn their alleged powers.

Can we imagine otherwise, than that the college have reckoned on this supineness and passive endurance, else could they have pertinaciously continued their system of usurpation after the repeated admonitions which they had received from the very bench? Yet, hopeless as contention has been on the part of those opposed to the college, so sensibly have grievances been felt, that the history of the college presents an almost uninterrupted series of litigation. A recapitulation of all the suits in which they have been engaged would be tedious, and greatly exceed my present limits. It would, moreover, serve rather to

perplex than elucidate the subject at issue, as a large proportion of these suits, though arising from sensible grievances, have yet been confined to minor points, on which the legal powers of the college were indisputable, and which it is not a little strange that the parties were not prevented by their legal advisers from contesting. I shall confine myself then to those few instances in which the power of the college to refuse admission to their fellowship, or to deny examination to candidates, has been disputed in courts of law.

In 1771, Dr Archer and Dr Fothergill claimed admission as fellows. But they were misguided in demanding it on a wrong grounnd, namely, that of their licence, which ground being deemed untenable, they were consequently defeated.

The decision in this case, however, gives no support to the legality of the college proceedings, for the judges waved all consideration of a question which did not come formally before them, declaring that, "be the bye-law good or bad, the right of admission was claimed under it," and that "it would be a most unreasonable thing to accept this licence under the bye-law, and to treat those bye-laws as null and void; to turn the licence so accepted against the persons from whom it was accepted, and to set it up as the foundation of a right to be admitted under the charter."

The main question was at length brought to issue by Dr Stanger, who, about the year 1796, having applied to the college to be examined for admission into the order of candidates, and having been by them refused, on the ground of some prohibitory bye-law, moved the Court of King's Bench for a mandamus to compel the college to admit him to examination. The court granted a rule, in course, for the college to shew cause why a mandamus should not issue; on which affidavits were made by the president of the college, and by their attorney, justifying the refusal. The grounds of justification were, that, by one of their bye-laws, no person could be admitted into the order of candidates except a doctor in medicine of Oxford or Cambridge, and that Dr Stanger was not a graduate of either university; and that there were two bye-laws of the college by which licentiates of certain descriptions might be received into the fellowship, without their previously entering into the order of candidates. The bye-law which restricted admission into the order of candidates to the graduates of Oxford and Cambridge, had been decided by Lord Mansfield to be bad; and, according to the confession of the counsel of the college, the two bye-laws which allowed licentiates to enter the fellowship, had been framed in consequence of the censure passed by that judge up-

on the former system of admission, and of his recommendation that a more liberal one should be adopted. One of these bye-laws provides, that the president of the college may, once in two years, propose a licentiate of ten years standing, to be admitted into the college without examination; the other declares, that licentiates of seven years standing, and who completed the 36th year of their age, might be admitted into the college, should they be found fit upon examination. This latter requires that the licentiate should be proposed by a fellow; and on this ground the question was argued by Mr Erskine, who represented that any licentiate of a particular description, if proposed by a fellow, would be admitted to examination; and that, if a licentiate could not find one fellow willing to propose him, he must be personally so objectionable as to be utterly unfit for admission into the college, and such an one as the court ought not to force upon them by a mandamus. This, at least, is the tenor of Mr Erskine's pleadings. Some informality having been detected in the mode of Dr Stanger's application to the college, the pleadings ceased, and the rule was discharged. After renewing his application to the college, and again moving the court for a mandamus, a new rule was granted, and the question brought to trial again in May 1797; when, on a repetition of the pleadings formerly urged by Mr Erskine, the mandamus was refused on the ground of the interference of the court being unnecessary, inasmuch as the way was sufficiently open for admission under the college bye-law. Lord Kenyon clearly admitted that the college were bound to examine, but, deeming the college "the sanctuary of honour and good faith," as his Lordship was pleased to term them, he thought the application would be as effectual, if made to them under the provisions of their own bye-law, as if a mandamus were to issue. The sincerity of the college in respect of this bye-law having been doubted, and it having been believed by many licentiates, previously to the decision in Dr Stanger's case, that the college never meant to admit any licentiate to examination; Dr William Charles Wells, a licentiate of the college, resolved to put their sincerity to the test, by applying for examination under the bye-law. Accordingly, in September 1797, a motion was made at the college by Dr David Pitcairn, and seconded by Dr Mathew Baillie, that Dr Wells should be admitted to examination for the fellowship. Although Mr Erskine had declared, in the case of Dr Stanger, his firm conviction that if Dr Stanger had applied to the college for examination under the bye-law, he would have been admitted, and though the alleged certainty of such admission to examination, on proper application, was the ground on which

Lord Kenyon and the other Judges refused the mandamus, yet, on Dr Wells's application, the college declined acting on the bye-law, considering it *a dormant bye-law*, and *that the propriety of reviving it required much serious consideration.* Yet this bye-law, according to the declaration of their counsel in the Court of King's Bench, had been framed in 1778, with the best legal advice this country could afford, for the express purpose of removing the blame which had been thrown upon them by Lord Mansfield; it had been brought to their recollection in 1809, by an application under it from Dr Sims, and had been twice sworn to before the Court of King's Bench, in the case of Dr Stanger, in 1796 and 1797. On such grounds was Dr Wells's application opposed, and Dr Pitcairn's motion was got rid of by the previous question, which was carried by a majority of three, thirteeen voting for, and ten against it.

As the motion of Dr Pitcairn was not directly negatived, Dr Wells resolved on having it renewed, lest the college should, on any future occasion, attempt to evade the just interpretation of their conduct, by alleging that this motion was only suspended, and not actually rejected. Dr Pitcairn, accordingly, undertook to repeat his former motion in the following September, before which time it could not be made, for the bye-law enacts, that such proposals shall only be made on one particular day of the year. During the interval, the college proceeded to enact another bye-law, by which, whoever meant to propose a Licentiate for examination, was required to give notice of his intention at a preceding quarterly meeting of the college.

In compliance with this bye-law, Dr Pitcairn attended the college meeting in June, and gave notice of his intention to propose Dr Wells for examination in September. Being unable to attend the September meeting from severe illness, he deputed Dr Baillie to make the proposition. This, however, was resisted by the college, or rather by the prevailing party, on the plea, that the new bye-law required the proposal to be made by the very person who gave the notice; and a question being put, whether the delegation of Dr Baillie should be allowed, it was negatived by a majority of three, twelve voting against, and nine in favour of it. On this, another attempt was made to bring the question forward, by reverting to Dr Pitcairn's former motion, which had only been indirectly got rid of; but on the minutes of the former meeting of September 1797 being read, it was declared that Dr Pitcairn's motion had then been finally disposed of and rejected.

Thus the evidences of the policy pursued by the college are rendered complete, and the views with which they have framed

their bye-laws are so manifest, that no one can fail to penetrate their real designs, or hesitate to pronounce on the "honour and good faith" with which their bye-laws are administered.

From the preceding statements, then, it is quite clear that the college have no disposition to relinquish their usurped power, which they have so long despotically exercised,—and also, that the aggrieved parties can expect no redress by appealing to courts of law. It only remains for them, then, to submit their hardships respectively to the consideration of the Legislature, and solicit whatever relief the wisdom of Parliament may deem them entitled to. On viewing the power and influence of the corporate body whose conduct is arraigned,—the extent of the abuses which prevail in the corporation,—the length of time during which they have obtained,—and the pertinacity with which they are continued, it must be clear to every sound and reflecting mind, that no alternative remains but an appeal to the Legislature.

But another view remains to be taken of this subject, of no less importance than that which has just been discussed; for though a just and liberal exercise of the powers entrusted to the college, and a due regard to the principle on which their charter was granted, would have obviated much of the injury which their usurpation has inflicted, yet so vast have been the changes which a lapse of three centuries has effected, not only in the state of the science and profession of physic, but also in that of society in general, that there can be little difficulty in demonstrating the utter unsuitableness of the existing laws, even if faithfully administered, to the present state of things, or their inadequacy to accomplish those purposes for which they were designed. When the existing laws were framed there was no medical school in Britain. Physicians were invariably educated at the continental schools. Many were engaged in the practice of physic who were not physicians; and many, no doubt, assumed the denomination who were not entitled to it. The ignorance against which it became necessary for the Legislature to provide cannot be better displayed than by referring to the preamble of the 3d Henry VIII., which states, that, "Forasmuch as the science and cunning of physic and surgery (to the perfect knowledge whereof be requisite both great learning and ripe experience) is daily, within this realm, exercised by a great multitude of ignorant persons, of whom the greater part have no manner of insight in the same, nor in any other kind of learning; some also can no letters on the book, so far forth, that common artificers, as smiths, weavers, and women, boldly and accustomably take upon them great cures and things of great difficulty, in

which they partly use sorcery and witchcraft, partly apply such medicines to the disease as be noious and nothing meet, therefore, to the high displeasure of God, great infamy to the faculty, and the grievous hurt, damage, and destruction of many of the king's liege people, most especially them that cannot discern the uncunning from the cunning, be it therefore," &c. For such evils the remedy provided by this statute was direct and appropriate. Examination was the only test by which the competency of practitioners could be tried, and this was consigned to the only men who were at the time qualified for conducting it. Even when the power of examination was transferred by the 14th and 15th Henry VIII. to the London College, the obvious objection to entrusting men engaged in a lucrative employment, with the power of trying those who were to become their own competitors, and thus subjecting them to temptations calculated to warp their integrity, might, perhaps, be considered as overruled by necessity, and the want of any other suitable test. But since that period, medical education has been brought to such perfection in Britain, and the competency of medical graduates is so fully attested by the universities at which they obtain their degrees, that the additional scrutiny of the London College is as needless in reality, as it is vexatious and insulting in that exercise of it to which the college resort. The great object of legislation in regulating this or any other department of the profession, is to ensure to the public the due qualification of those who profess the practice of the art, and to protect the latter in the free exercise of their profession.

The education required, then, should be such as the improved state of medical science demands, regard being had to the necessity of providing the public with a certain supply of medical aid, and of not abridging this too much by enjoining qualifications too high or too costly, the effect of which must ever be the same as that of all monopolies, namely, that of diminishing the competition, which ought to exist in all lawful trade, and increasing to an indefinite extent the contraband; nor can there be any doubt that the restrictive policy adopted by the London College has been the means of spreading widely the evils of quackery, and that the perverted exercise of their powers has thus tended to extend and perpetuate what these powers were given to correct and prevent. That the medical education of Edinburgh and Glasgow Universities accomplish every thing that elementary instruction can supply, is a truth too obvious, too well established, and too universally allowed, to be disputed.

The degrees granted, then, by these universities, which are only obtained by a definite course of resident study, and the

test of actual examination, openly conducted in the halls of the universities, afford as complete tests of competency as any examination which the London College can institute. To superadd their examination to those by which the medical degrees of Edinburgh and Glasgow are obtained, is to harass individuals for no good end, and to subject them to trials which, while utterly superfluous, may chance too to be decided on far different grounds than the real merits of the candidate. That some central association should exist for enrolling and legalizing, as practitioners, the several physicians supplied by the universities seems highly expedient; but the functions of such an association should be confined to examining and verifying the original degree, the proof of which should entitle the person possessing it to enrolment, to the right of freely exercising his profession in any part of the British dominions, and to a full participation in the rights and privileges conferred by the charter of association. It would, perhaps, be right, so long as certain universities think proper, to confer degrees in physic, without subjecting the candidates to the test of examination, founding their testimonials on private certificates only, to limit the right of admission into the medical college or association to those graduates whose degrees had been obtained by full trials, requiring those whose degrees were obtained by special grace, or on private testimonials of ability, to undergo before the college an examination corresponding to what the universities require. This would be a just and suitable expedient for equalizing those different graduates, and would tend directly to bring the summary modes of obtaining degrees into disuse, by providing, that such graduates could not wholly evade examination, while it would leave such degrees still within the reach of those to whom it may be desirable, in advanced life, to become possessed of such titular distinction. At present, the Edinburgh graduate, who has been tried by ample tests, and the St Andrews graduate, who may not have been subjected to any, are equally examined by the London College, on applying for a licence. This surely is a direct inducement to individuals to prefer the cheap, convenient, and summary process by which a St Andrews degree is obtained, to the arduous studies and strict examinations of Edinburgh. Were such a distinction as I have proposed adopted, the abuses of Aberdeen and St Andrews degrees in physic, which have been so long a subject of complaint, would be rendered harmless, while any advantage that can be considered to arise from them would still be preserved. It may illustrate this part of the subject to shew what those tests are by which an Edinburgh degree in physic is

obtained, and what are the examinations enjoined by the London College.

The University of Edinburgh requires, that every candidate applying for medical honours shall have been a student of medicine in some university for three years, and shall have regularly attended a course of lectures by each of the six medical professors, as also clinical lectures and hospital practice; that he shall, on proof of this, be examined five several times as to his attainments in medical science; shall publish an inaugural dissertation on some subject connected with medicine, and produce such other written exercises as are enjoined by the Senatus Academicus, previously to obtaining his medical degree. His first examination is a general one by the whole facultas medica, (which consists of the six medical professors,) and is the principal and most important of the whole. The second is of a similar nature, but is by two professors only, and for a shorter time. In the third, the candidate defends two commentaries written by him on two given subjects, the one an aphorism of Hippocrates, the other a medical question. In the fourth, he defends similar commentaries on two histories of diseases, the one an acute disease, the other chronic; and in the fifth and last, which is a public one in the hall of the university, he defends the opinions advanced in his published thesis. All his examinations and exercises are in the Latin language. The sufficiency of these tests, as proofs of competency, cannot be disputed; as far as I am aware, they greatly exceed in strictness the trials to which the members of other professions are subjected. Yet an Edinburgh graduate, on applying for the licence of the London College, is subjected by them to the same trials, as if he had never previously passed a medical examination. Can this be necessary,—is it just,—or is it calculated to answer any one good purpose? But the hardship ends not here; for if a licentiate thus qualified should aspire to the fellowship of the college, and, by signal favour, be admitted to examination, he must submit to trials still more tedious, harassing, and vexatious. The course of procedure in this last trial is worthy of attention. In the first place, the college requires that a licentiate shall be of seven years standing, and upwards of thirty-six years of age, ere he can be proposed for examination; the proposal must then be made on one particular day of the year, and the fellow proposing must have personally attended at a previous quarterly meeting, and notified his intention to make such proposal. The proposal is then subjected to a secret ballot, by which it is decided, whether an examination shall be granted. Should the decision be favourable, his first examination is fixed to take place in three months after; and the second and

third follow at similar intervals, a decision being made after each by the majority, as to whether any other shall be allowed, or the candidate then rejected. In this way is he "tortured for nine months with doubt and anxiety," respecting an event in which all his interests, and probably those of his family, are involved; for though it be optional for a licentiate to subject himself to this trial, yet having done so, its result, if unfavourable, must produce the most baneful consequences to his future career. Surely it is time for the Legislature to interpose its authority, and rescue a much aggrieved and highly meritorious branch of the profession from the despotism by which it has been too long oppressed, and to give to it a constitution more suited to its wants,—more consonant to its dignity,—more just to its merits,—and more adapted for calling forth its energies in the service of the public. That the Legislature have every disposition to perform this duty when duly required, I faithfully believe. But they cannot be expected to legislate gratuitously, or without grievances being alleged, or redress called for. If what has been represented in the foregoing pages be founded in truth, there are grievances of considerable extent, and affecting large numbers. But if none of these come forward to declare the evils by which they are oppressed, the Legislature cannot surely be blamed, if they regard all occasional complaints as visionary and unfounded. If a competent portion of the licentiates of the college, and of the unlicensed physicians practising in the provinces, will only unite in petitioning Parliament for an inquiry into the present state of the profession, I am firmly persuaded that such inquiry would not be withheld. So vast and so deeply rooted are the existing evils, that no power but that of Parliament can be adequate to extirpate or correct them. To pronounce what reformation should take place, would be to prejudge the question, and to anticipate the results of a parliamentary investigation. And, indeed, I cannot help thinking, that former attempts at reforming the profession have failed of success, principally from error being committed in this respect, and in bringing forward specific plans, founded on partial inquiries, rather than submitting their grievances respectfully to the Legislature, and soliciting that general inquiry into the circumstances of the whole profession, which can alone lead to just conclusions. If a parliamentary inquiry were once obtained, (and no investigation of less authority would be equal to the task,) such full information would be elicited on every part of the subject, as could not fail to open clear and correct views of the amendments required.

That some amendment is necessary, is too glaring to be denied. In my former essay, I attempted to establish some of

the principles which should guide the Legislature in regulating the general profession. In the present tract, I have endeavoured to trace to their source the evils to which the department of physic has been so long subjected.

It remains, as an essential part of my present inquiry, to correct an error that seems to prevail very extensively among the unlicensed physicians of England, respecting the legality of their practice; and as this error has at present the support of legal opinion formally taken and deliberately pronounced, it becomes necessary to scrutinize with some minuteness the grounds of this opinion, in order to confute it.

By the charter of the London College, and the statute 14th and 15th Henry VIII., no physicians whatever are suffered to practise in London, unless licensed by the college, penalties being specifically annexed to a violation of the prohibitory clause. By the 3d Henry VIII., c. 11, § 2, it is ordained, that no person shall practise physic in the provinces, unless licensed by the Bishop of the Diocese, &c. on certain specified penalties. The 14th and 15th Henry VIII., c. 5, § 3, repeats the prohibition, but changes the examiners, and transfers the licensing power from the Bishop of the Diocese to the London College. These statutes are unrepealed, and consequently in full force whenever they are called into operation. It has been shewn how the disuse into which they have fallen, as far as regards their operation in the provinces, has misled physicians very generally into overlooking their existence. But a direct persuasion of their nullity has been diffused among the profession, by a legal opinion of high authority expressly taken on the subject. It will be recollected, that certain attempts, originating with Dr Harrison of Horncastle, in Lincolnshire, were made some years back, to effect a reformation of the profession. At this time it became desirable to ascertain the real state of the law on the subject, and the extent of power legally possessed by the London College. A case was accordingly prepared with considerable care, and submitted to the late Sergeant Williams for his opinion. The queries which relate to the control of the college over the general practice of the kingdom are as follows:— "Have the London College of Physicians any real or effective power under the 14th and 15th Henry VIII. of controlling generally the practice of physic in England, at a greater distance than seven miles from London?" "If they have such power, does it extend to Doctors of Physic, not graduates of Oxford or Cambridge, or merely to persons practising without a diploma?"

In reply to these queries the learned sergeant gives it as his

opinion, " that the London College of Physicians have not any power whatever, either under their charter confirmed by the 14th and 15th Henry VIII., c. 5, or by the 3d section of that act, to control the practice of physic in England at a greater distance than seven miles from London." And he expressly grounds this opinion on there being no penalty inflicted by the prohibitory clause, in consequence of which omission he distinctly pronounces the act in this respect to be a " dead letter, and wholly inoperative." He further asserts, that any person, with a degree or without one, or with a licence or without, may practise in England at a greater distance than seven miles from London, without being under the control of the College of Physicians, or of any other, or liable to any penalty for so *doing*, notwithstanding the statute 14th and 15th Henry VIII. Such an opinion could not fail to make considerable impression on the profession, and to disincline them still more from seeking any connection with a college that could yield them no protection, and which had no legal control over them. Every inducement for obtaining the college licence must thus have been considered at an end; nor could any provincial physician, after this authoritative interpretation of the law, be expected to subject himself gratuitously to the inconvenience, vexation, and expence, attendant on the forms by which the College licence is obtained.

And yet there is but too strong reason for believing that this opinion is invalid, and that no physician can legally practise his art in any part of England unless licensed by the London College, excepting the medical graduates of Oxford and Cambridge. The opinion infers the nullity of the statute in respect of provincial practice, on the ground of no penalty being prescribed. Now, a twofold error seems here to be committed; for it is by no means clear that a penalty is not prescribed, and, even if there were none, such an omission would in nowise nullify the prohibition of the statute. Each of these points requires to be illustrated. It is true that the 14th and 15th Henry VIII., c. 5, § 3, expresses a naked prohibition unsupported by penalty. But this clause has a direct reference to the 3d Henry VIII., c. 11, § 2, which has never been repealed, and varies from it only in altering the examiners, and transferring the licensing power, leaving the " like pains" attached by the earlier statute unaltered. There is little doubt, then, that, if a question of law were to arise on this point, these statutes would be considered in conjunction, and the penalties of the earlier adjudged to a violation of the later. But, supposing it otherwise, and that the later statute should be considered as

standing alone, still it would not be inoperative for want of a penalty, for "a remedy is a consequent, or thing implied in every prohibition by any statute." The penalty incurred, where none is specified, is fine and imprisonment; and where no form of action is prescribed, an action upon the statute lies. (See 2d Inst. 54, 74, 131, 163. Case of Marshalsea, 10 Rep. 75. Crowther's case, Cro. Eliz. 653. 1 Hawk. 92.) Indeed, no rule of law seems better known, or more frequently recognised, than this, "that for any thing generally prohibited by statutes, if it be done, an indictment lies for it, notwithstanding punishment be not expressly given." (See Comyns, Digest. art. Indictment, 871. 2 Hale, 171. Str. 1146. 4 T. R. 202. 3 Chitty's Criminal Law, 588.) No doubt, therefore, can be entertained of the illegality of all provincial practice by physicians who are not licensed by the London College, all such being liable, on information, to conviction and penalties. It is no doubt true, that the college has no express authority under the statute to prosecute for such offence, and if Sergeant Williams's opinion were to be considered only with reference to the powers of the college, it might seem to admit of some justification, for the college have rather a trust to execute, a duty to perform in examining those who apply to them, than any direct power of controlling those who omit to obtain their licence. Any one, however, may prosecute; and if a *qui tam* informer should arraign a physician's legal qualifications, and succeed in establishing a negative, the courts would, in such case, have no discretion, but must administer the law as they find it, and, after verdict had, the infliction of penalties to a certain amount must ensue. Thus a large and respectable body of practitioners, possessing every essential qualification, and chargeable with no wilful fault, are placed in the humiliating situation of being liable to prosecution for a legal misdemeanour at the suit of any common informer, and have no security against such prosecution, but the insufficiency of the penalties to tempt the informer's cupidity. So far they seem safe from prosecutions instituted by mere love of gain, though not from those to which malice might incite. But there is another consequence of their practice being illegal, which affects them more nearly, as being more liable to occur; this is the incapability of recovering under an action of defamation of professional character, however grossly or wantonly assailed. The case of Smith against Taylor is directly in point. (See 1 Bos. and Pul. New Rep. 196.) This was first tried at the assizes of Suffolk, and the plaintiff recovered a verdict for L. 100 for disparagement of his professional character. A new trial was moved on the ground that the plaintiff had not

produced any evidence of his being a regular physician; to this it was answered, that the allegations in the declaration were not such as made it necessary for the plaintiff to prove his diploma. On this new point of pleading the court were equally divided; but with regard to the privileges conferred by a Scotch diploma as to practice in this country, they all appeared agreed, that, "if it was necessary to prove that the plaintiff had lawfully practised, the objection to his recovery of damages was well founded; for the practice being the ground of action, no action can be maintained for lessening that which ought not to exist at all." The court also said, "that a person practising physic, without any authority, is liable to prosecution at the suit of any person; for, as the prohibition is general, and no mode of punishment is pointed out, it follows, that he who offends against the provision is liable to an indictment." These multiplied authorities place the question of law beyond a doubt, and shew in what light Scottish graduates in physic are regarded in the eye of the English law. When it is considered how large a portion of British physicians are qualified exclusively at the medical schools of Edinburgh and of Glasgow, and how few of these deem it requisite, or even know it to be necessary, for them to legalize their practice by obtaining the licence of the London College, it will hardly be denied that some change is required in the law of the land which shall bring these meritorious individuals within the pale of legal protection.

It may not be amiss to conclude this essay by briefly specifying some of the hardships under which physicians actually labour, in consequence of the imperfections of the existing laws.

It is a hardship that the legal qualification of the physician is so inconsistent with those causes by which the essential acquirements of his profession are obtained, that, in pursuing the latter, he almost of necessity abandons those professional distinctions which by law he is justly entitled to claim.

It is a hardship that the law of the land has fallen into such disuse, that physicians, whose courses of education are necessarily influenced more by prevailing practice than by any intimate acquaintance with the statute-book, learn the real state of the law on the subject only when too far advanced in their professional career either to modify or abandon it.

It is a hardship that the original testimonials of the physician's professional competency, though emanating from highly dignified universities, and obtained only on proofs of regular study and the test of strict examination, are yet of no avail in giving him a legal qualification to practise, but that he is after-

wards subjected to repeated ordeals, founded on no conceivable ground of public benefit, and conducted by men directly interested in narrowing their profession.

It is a hardship that, even after submitting to additional and superfluous trials, such as are wholly unknown in other professions, he is not free to practise his art where convenience or necessity may incline him, but that in each capital of the united kingdom, (at least in London and Dublin,) he is met by corporate restrictions, which render it necessary for him to undergo still further trials, that are tedious, harassing, expensive, and every way vexatious.

It is a hardship that, in consequence of omissions into which he is unwittingly betrayed, the unlicensed physician is placed out of the pale even of legal protection, and that, however assailed by wanton or malignant calumny, he can have no legal redress, because he can only seek this on the ground of injury done to his professional character, in which character the law cannot recognise him.

These grievances will hardly be deemed speculative or visionary. As an illustration of the hardships actually felt, I shall briefly notice an instance of recent occurrence, which must demonstrate how much individuals are obstructed in professional career by corporate restrictions, and by the want of that mutual accommodation that should subsist among the several medical corporations.

A medical man had successively become a Member of the Royal College of Surgeons of Ireland, a Doctor of Physic of the University of Glasgow, and a Licentiate of the London College of Physicians. He afterwards served as Physician to the Forces with the British army for many years, and in almost every quarter of the world. On the reduction of the army, he was naturally led to seek for occupation in private practice, and was influenced by a concurrence of circumstances in wishing to fix his residence in Dublin. Here, however, he found that he could only hold an inferior rank in his profession, unless he became a licentiate of the Dublin College of Physicians, whose licence was only to be obtained by fresh examinations and fresh fees. These latter, though not inconsiderable, he might have disregarded; but finding that the college were not likely to respect the multiplied qualifications which he already possessed, or to wave in any degree their right of censorship in examining him, and being too haughty in spirit to brook the indignity of submitting at his age, and under his circumstances, to a school-boy examination in elements, he abandoned his views of Dublin practice, and determined on relinquishing medical speculation of

every kind. Thus the public has been deprived of the matured experience of a highly qualified physician, and of the valuable services which he could so eminently have rendered, while he is prevented seeking those advantages to which his talents and acquirements entitle him, and is consigned to listless inactivity, or to cheerless and unprofitable peregrination, at a period of life, which a judicious writer has well pronounced to be that of "sober thought and steady exertion." How the public is recompensed for such loss, or what advantages result from the present system, to compensate so much public and private injury, I am unable to discover. A parliamentary investigation may possibly bring them to light, and thus either disprove the complaints so generally made, or shew them to be irremediable. In either case good must result from inquiry; and as individuals cannot be expected to persevere in a hopeless advocacy of reformation, or to waste exertion in the discussion of grievances, to which the parties affected seem by their supineness to be insensible, they who concur with the author of this Essay in believing the grievances to be real and oppressive, and in deeming some reformation called for, are earnestly requested to avail themselves of any impulse which the foregoing representations may excite; and to arrange some plan of co-operation by which the prevailing sentiments of the profession on this highly important question may be respectfully submitted to the Legislature. On the Licentiates of London, the duty of making the necessary arrangements would appear to devolve; and if such arrangements be founded in the spirit of truth, disinterestedness, and regard for the welfare of the public, the results cannot fail to be satisfactory, whether they establish the reality of evils, and promote their correction, or evince that none exist, save what arises from that imperfection which belongs to all sublunary things.

P. S.—I was unwilling to extend the present tract, or to distract attention by multiplying the objects demanding it, else I should have noticed a clause in the last apothecaries's act, which is calculated to effect a very considerable revolution in the line of "general practice" in England.

In my former tract, I think I succeeded in demonstrating the importance of the "general practitioner," and shewed, pretty clearly, the advantages which resulted to the community, from that silent operation by which the members of the London College of Surgeons supplied this species of practitioner. With these convictions, I could not, without surprise and concern, read the following clauses of the 55th Geo. III. c. 194, which, if

enforced, must effectually preclude all future surgeons from the practice of pharmacy, and thus unfit them for acting as general practitioners, unless they also become members of the apothecaries's company.

The clauses are as follows: "XIV. And to prevent any person or persons from practising as an apothecary without being properly qualified to practise as such, be it further enacted, that from and after the 1st day of August 1815, it shall not be lawful for any person or persons (except persons already in practice as such) to practise as an apothecary in any part of England or Wales, unless he or they shall have been examined by the said Court of Examiners, or the major part of them, and have received a certificate of his or their being duly qualified," &c.

"XV. No person to be admitted to examination, unless he shall have served an apprenticeship to pharmacy of not less than five years," &c.

"XX. Penalty for practising without a certificate L. 20, for an assistant L. 5."

Does not this act give to the apothecaries an effectual monopoly of the line of general practice, and can future surgeons practise pharmacy consistently with these legal prohibitions?

The result may, no doubt, be eventually the same, whether the surgeons or apothecaries furnish the general practitioner; nor does it much concern the public from what source he emanates, provided he be duly qualified.

But I own myself at a loss to understand why the mode of superadding physic and surgery to pharmacy is preferred to that by which this country has been so long supplied.

It is somewhat extraordinary how the London College of Surgeons could have suffered this bill to pass unopposed; for it strikes at the very root of their charter, the great demand of society being not for mere surgeons, but for surgeon apothecaries.

The circumstance affords an additional proof, I think, of the danger of legislating partially for the profession, and of the necessity of determining, by a full and comprehensive survey of the profession, the relationship which its several departments bear to each other.

April 19, 1820.

II.

Case of Accidental Poisoning with Corrosive Sublimate, treated successfully. By CHARLES THOMAS, M. D.

MRS C——, aged about 30 years, on the 15th of January 1815, had been confined a month with her fifth child. Her delivery, and all the circumstances, both previously and subsequently connected with it, were of the most favourable kind. Her general health had always been good. But, for a year or two before, she had been troubled with an eruption on the face, which resisted various applications employed to remove it. During her confinement, the medical gentleman, under whose care she was, had given her several lotions, composed of muriat of mercury, for it. The first of these contained ten grains; but he increased the quantity five grains in each succeeding lotion, till that of the last amounted to *thirty* grains. She had used this last lotion twice, by merely wetting a rag at the mouth of the phial, and touching the eruption with it. On the morning of the above mentioned day, this lotion was placed on the chimney-piece by the side of a draught, which she was to take. She called her nurse about seven o'clock to give it her; but this woman, with a degree of carelessness which cannot be too strongly reprobated, poured out the lotion into a tea-cup, instead of the draught, and handed it to Mrs C——. At this hour there was but imperfect day-light, so that she could not well see what was in the cup; and at the very moment her attention being particularly called to her child, and having full confidence in the nurse's attention and care, she very hastily drank off its contents. While swallowing it, she thought the quantity to be greater than she expected; and the moment it appeared to reach the stomach, there was a violent burning sensation in it. She immediately inquired of the nurse what had been given her, and ascertaining the mistake which had been made, exclaimed that she was poisoned, and directed that I should be instantly called. I was in the room in a minute or two, and found her sitting up in the bed, irritating the throat with her finger, in order to excite vomiting. By this expedient a considerable quantity of fluid continued to be spit up. I had been reading a very short time before, in Rees's Cyclopædia, of Mineral Poisons, and that liver of sulphur was considered the best antidote for corrosive sublimate. This impressed me so strongly with the necessity of procuring some of it, and that with as

little delay as possible, that I ran away myself to call the surgeon, who lived at a considerable distance, principally to mention this remedy to him. About *three quarters of an hour* had elapsed from the time of her swallowing the poison before the surgeon and myself could be with her, bringing with us what was deemed necessary to be administered. She was then complaining of intolerable burning in the throat and upper part of the stomach, which she described as gradually sinking lower down. An emetic of ipecacuanha was given. In a few minutes she grew sick. Two large spoonfuls of a strong solution of liver of sulphur was then swallowed. This was scarcely down when she vomited copiously. A spoonful more of the solution was given, and several times repeated in the intervals of vomiting. This was kept up by warm water and chamomile tea, in which some salt of wormwood was dissolved; how much I don't know. * Between two and three hours after taking the poison, spasms came on, first in the toes and feet, and then in the fingers and hands, and afterwards extending up the legs and arms. A violent spasm attacked the right breast, and shot through to the back, just under the shoulder-blade. The breast became much contracted, and its milk was speedily dried up. She seemed much exhausted. The surgeon had left directions to give a spoonful of the dissolved liver of sulphur, whenever any complaint was made of heat in the stomach. Soon after this, she was seized with alarming faintness, which continued to recur at short intervals. The administration of ether removed this symptom entirely. She again complained of burning deep in the stomach. More of the liver of sulphur was given; "this," as she described it, "soothed the pain in such a way, that it seemed like pouring water on fire." †

After this she no more complained of burning heat, but the stomach remained unsettled with frequent urging. Towards evening an attempt was made to give a spoonful or two of gruel, but the stomach rejected it. The first night was passed in a tranquil state, and free from pain; but she appeared much exhausted.

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* The colour, or any other property of the fluid, ejected by vomiting, is not mentioned.

† In Mr Valentine's cases in the Edinburgh Medical Journal, for October 1818, a similar effect was produced by a saturated solution of supercarbonate of potass in water. "The alkaline solution," says he, "appeared to excite disgust, but afforded evident relief when swallowed, by the *instant calm immediately produced*, when it came in contact with the inner surface of the stomach."

January 16.—During the whole of this day she was nearly in the same state as in the night; free from pain, faintness, or spasms, with some sleep at times. But the stomach continued so irritable that nothing would remain on it.

During the second night her sleep was disturbed by frightful dreams. She began to think unfavourably of her situation, which had not been the case before. She had been hurried in her sleep, by fancying that an horridly looking figure was at the bed side presenting a bottle to her.

January 17.—Early this morning she had for a considerable time a severe tingling sensation, similar to that which, in familiar language, we describe by the expression of "being asleep." About four or five o'clock she complained of pain at the pit of the stomach, which she said had been increasing for some time before. On pressing my hand firmly to the part affected, I felt wind rolling under it. Warm cloths were applied, and ether again given. These means speedily removed the pain.

During the day she took frequently a little negus, gruel, and toasted bread, which we had the satisfaction to find settled well on the stomach.

In the evening very distressing tenesmus came on. She had felt it a considerable time before she spoke of it, and getting worse and worse, nothing passed but mucus, tinged with blood. It was relieved by two common clysters.

From this time every thing went on favourably. She did not venture to take any solid or animal food for a week or more. The first time she attempted to take animal food, the teeth appeared to refuse their office. They seemed loose and blunt. About this time, also, bits of dead skin came away from the throat and mouth, resembling the peelings of roasted potatoes. A tooth had been drawn some little time before, and from the vacuity it had left, a large piece of the gum came away. From the side of the tongue also a portion separated, of the size of a large pea, leaving a cavity corresponding to its extent. The tongue, gums, and throat continued tender while these substances were coming away.

I do not perceive that any particular effects have been left on the constitution. The right breast remains in the same contracted state I before mentioned. The milk was several days later before it appeared in it than in the other, when she again became a nurse two years ago.

I particularly examined the bottle in which the lotion was, immediately after the accident, and found *no kind of sediment at the bottom. It was completely emptied.*

III.

Case of Fractured Skull, with Loss of a Portion of the Brain, successfully treated. By S. Peake, Member of the Royal College of Surgeons, London.

On Sunday morning, September the 19th, 1819, I was desired to visit immediately W. H., a lad about 18 years of age, who had just before received a fall from a horse. Upon my arrival, I found him lying upon a temporary bed in a room below stairs, complaining of great pain in the head, but sensible; he was continually sick, and had vomited much. Upon examining the head, I found on the right side, just at the junction of the temporal with the parietal bone, three small contused wounds, from which there had been much hemorrhage; they were still bleeding, and with the blood, as it poured forth, was mixed a whitish substance, which every now and then escaped from the wound, and in quantity about as much as would form a pea.

Before I passed a probe, I could observe an evident depression of bone, and feared, from the appearance of what I have described above, there must be not only a fracture of bone, but also an injury to the substance of the brain itself. This I found to be the case, for, upon examination, I discovered an extensive fracture of bone, and that not only pressing upon, but passing into the very substance of the brain. The boy was sufficiently sensible to inform me in what way the accident had occurred. The horse upon which he was riding had run away with him; the boy, from terror, his hat having previously fallen from his head, threw himself off, and fell with great violence with his head upon a heap of stones that were lying by the road-side. He was directly discovered in a state bordering upon insensibility, and carried home, a short distance only from the scene of this unfortunate accident.

I apprized my patient it would be necessary to perform an operation in order to remove the fractured pieces of bone, to which he readily consented; and some few hours afterwards, in the presence of Mr Hayward, surgeon, of Epping, and my pupil, Mr Smith, I commenced by making an incision freely and directly across the seat of the fracture, thereby exposing the whole of the broken pieces. Having done this, I was enabled, by means of a pair of common dressing forceps, to re-

move a piece of bone from the centre of the fracture, and was then able to get at the remainder without the use of the trephine.

Directly after the removal of this piece of bone, there issued a portion of the brain in one solid mass, and in quantity about as much as would fill a large sized tea-spoon; smaller portions also escaped, mixed with the hemorrhage, and continued to do so all along as we proceeded with the operation. Having removed the centre piece of fractured bone, I now found the levator very effectual, and by the help of it and my forceps was soon enabled to get away a second piece, and that much larger than the first. In the same way I succeeded with the third, and so on, until I had taken away, in the whole, seven pieces, all of which seemed to have rested, not *upon*, but had been thrust *into* the very substance of the brain itself. One small spicula in particular, about an inch long, passed in a straight direction into its very substance, and from that situation I removed it. We had now effectually taken away all the detached portions of bone, and found still a slight fracture passing downwards towards the face; it, however, caused not the least degree of pressure, nor did it extend far, or seem to be at all of consequence. I, however, applied the levator, and brought into contact the edges of the bone as nearly as could be done. Having done this, we very carefully examined the wound, in order fully to satisfy ourselves that every portion of detached bone had been taken away; and being fully persuaded it was so, we sponged out the wound, and proceeded to dress it with common adhesive straps, and a light bandage over the whole. Our patient bore the operation manfully, and was sensible throughout the whole of the time. We now directed that he should be put to bed, and the room darkened, that he should be kept as still and quiet as possible, and treated strictly according to the antiphlogistic plan and regimen, and be disturbed by no one.

He passed as good a night as, under such circumstances, could be expected; he had, however, little or no sleep, and in the morning complained of much pain and intolerance of light; the least noise, also, seemed to disturb him. I now bled him freely, and in addition to the medicines already directed, I gave him some cathartic mixture, which, in the course of the day, acted freely upon the bowels. On my next visit I found him labouring under great irritation; the skin hot and dry; the pulse much accelerated, and the least noise disturbed him very much; he could not bear to move his head from the pillow; had at times appeared delirious, and convulsive fits came on very frequently at intervals. I removed a part of the

dressings, and found a considerable discharge from the wound; there had been no hemorrhage of consequence. I had some difficulty to keep his head sufficiently long from the pillow to apply the dressings; his bowels were regular. In this state he was on the 3d and 4th day after the operation, and from this time to the 13th or 14th day, there seemed to be the greatest degree of doubt, whether he could possibly survive the effect of so extensive an injury to the most important organ of our animal economy. The discharge from the wound at each dressing was most extensive, and from the surface and substance of the brain came away very considerable sloughings, mixed with the discharge, which occasionally I in part removed with the point of a pair of small dissecting scissors.

From the 4th and 5th day he was for the most part sensible, except when the convulsive fits came on, which, from this time to the 13th day, were very frequent and severe. For many days and nights they came on at intervals of from 20 to 30 minutes, and sometimes much oftener, distorting the countenance in a horrible manner, and exciting an involuntary action of the whole nervous system throughout, from head to foot, affecting also the nerves internally; for the intestinal canal seemed to partake of the general sympathy, and was thrown into the most convulsive state of agitation, and, to use the poor boy's own expression, "when the fits came on they were ready to shake his very guts out." They lasted upon him for the most part, when I have been present, but a few minutes only; but his attendants have told me on my morning visits, that the convulsive fits had been on him for two or three hours together, and that they thought every minute must have been his last; and in this opinion, when it has happened that I have been also a spectator, I have been more than once obliged to coincide. Sometimes, while the fits were upon him, he passed both feces and urine involuntarily, but never at any other time. About the 14th day the discharge from the wound began to lessen, the sloughings also from the brain were less, and the general appearance of the wound was altogether much altered for the better; the convulsive fits were not so frequent, and the system in general seemed to be suffering less under the effect of this most severe injury. One circumstance I have omitted yet to mention is, that, while the convulsive fits were most urgent, he afterwards complained of paralysis of the left hand and arm. The injury on the head was on the right side. One day, in particular, he assured me he had no feeling at all in that arm or hand. As the convulsive fits, however, left him, sensation returned.

On the 14th day, from the favourable appearance of the wound,

and from the altered state of the discharge, as well as from the better appearance of the brain itself, for it is still visible, and from the boy's general state of amendment, I ventured to bring the edges of the wound more closely together, by means of a suture, and dressed it afterwards with strong adhesive straps. He still persists, and has done throughout, in the strictest attention to the antiphlogistic plan of treatment; he has now but little fever; does not complain of so much pain, and is enabled to bear the fatigue of dressing much better. On my next visit, the 16th day, I found him still improving; the convulsive fits now disturb him but little; the wound is looking better, and the discharge is abated, and we could observe in every symptom a change for the better. From this time to the 21st he kept on mending, as fast as the nature of the case would admit of, and on that day, exactly three weeks from the time of the accident, I permitted him for the first time to sit up for a few hours, which he bore very well. He sat up on the following day; and the next morning, much to my surprise, when I called to dress him, I found him outside the front door. New integument is forming rapidly over the surface of exposed brain; he has had no return of convulsions; has a good appetite; sleeps well; is free from pain; and at present there appears every reasonable expectation that this case of most extensive injury of the brain will terminate in the sufferer's complete restoration to health.

Chipping Ongar, Essex,
October 16, 1819.

P. S.—Since writing the above, the lad has been able to come every other day, a distance of four miles, to my house to have his head dressed. The wound is healing very rapidly, and he is in a state of complete convalescence.—*October* 29.

IV.

Case of Empyema. By John Renton, Esq. Surgeon, Penicuik.

J. M., a girl, three years of age, had been affected, for several weeks, with pain in the left side of the breast upon inspiration, and with a frequent short dry cough. The disease at first was regarded as a common catarrh. The symptoms,

however, did not yield to the remedies employed in the removal of that complaint. On the contrary, they gradually increased in violence. Respiration was performed with the greatest difficulty and pain. The child became weaker and weaker in consequence of a severe bowel complaint; and, for a considerable time before its death, was unable to breathe either upon the back or right side. The cough, which continued to the last, was never accompanied with expectoration. In addition to these symptoms, the mother of the child particularly remarked the frequent occurrence of rigors, and the unimpaired state of its appetite, notwithstanding all its distress and suffering.

My father was requested to visit the child, a few days before its death. He found it in a very weak and exhausted state. The countenance expressed great anxiety. The respiration was extremely hurried and difficult; and the child could not now be turned in bed upon the back or to the right side without feeling an immediate sense of suffocation. Upon applying the hand to the right side of the thorax, he was surprised to feel a strong and distinct pulsation, which did not cease upon pressure. Upon the left side of the breast there was a large tumour, extending from the third rib to the diaphragm downwards, and from the sternal extremities of these bones a considerable way backwards. No pulsation could be felt in the region the heart occupies in the healthy subject. The face was swollen, and of a livid hue. I afterwards learnt upon inquiry, that, for two days before it died, the respiration was so difficult, the child could not be laid in the horizontal posture, but was carried, upon the left side, in its mother's arms, (the only position in which it then experienced any mitigation in the state of its breathing,) and expired at last suddenly, after labouring under all the symptoms which arise from strangulation.

Dissection of the body after death shewed that the disease consisted of an inflamed state of the pleura, and of the formation of pus from the particular action of the blood-vessels of that membrane; or, according to Dr Baillie, from the layer of coagulable lymph which covers it.

The abdomen was very much swelled, and the tumour on the left side of the thorax had almost entirely disappeared. As there was reason to believe, from the symptoms of the disease, that the left cavity of the thorax was filled with pus, a trochar was introduced into the place, (where the operation of the paracentesis thoracis is generally performed,) in order to evacuate that fluid. About twelve ounces of thick healthy pus, such as is found in a well digested abscess, were evacuated by this means.

I have, however, to regret the doing of this, in as much as it prevented the situation of the heart from being exactly ascertained; for I have no doubt, had that been examined before the matter had been removed, that the heart would have been found having pushed forward the mediastinum towards the sternal extremities of the ribs on the right side, where its pulsations were felt. The cartilages of the ribs were divided, and the adhesions, between the anterior mediastinum and sternum, removed in the usual way. There were considerable traces of inflammation observed between the intercostal muscles and pleura. Nearly as much pus was found within the cavity of the thorax as was removed by the trochar; the quantity was not measured, but the whole was supposed to amount to twenty ounces at least. Nothing was found remarkable about the heart except its situation. It was found lying immediately below the sternum. The pericardium was of a dark colour, and the liquor pericardii in much greater quantity than usual. The substance of the heart was in a healthy state, and no morbid alteration was observable in its valves, or in the blood-vessels connected with it. The left lobe of the lungs was almost wholly collapsed. No air could be evacuated from it by pressure. There were no tubercles or marks of abscess to be discovered in its cellular texture. The pleura was of a dark livid colour, and much thickened and softer than natural. Its surface was uneven, and presented such marks as appear upon the skin after a severe attack of small-pox. The contents of the right cavity of the thorax were in a healthy state. The cavity of the abdomen was not opened.

The symptoms of the disease were strongly marked, and pointed out, in a very unequivocal manner, its real nature. The pathognomonic symptoms, distinguishing it from hydrothorax, were the rigors and other constitutional effects which mark the presence of hectic fever. The disease evidently appeared also to be confined to the left side of the chest, a circumstance not generally to be remarked in the history of hydrothorax.

The principal objects worthy attention in this case are, the unnatural situation of the heart, and the collapsed state of the left lobe of the lungs. It appeared from the dissection, that respiration for a very considerable time must have been carried on by means of the right lung entirely; and that the palpitation felt beyond the right side of the sternum must have been owing to the irregular contractions of the heart; and that death, in a great measure, was to be attributed to deranged circulation in that organ, and the lungs, &c.

Empyema is oftener a disease produced by the termination of other diseases, or a consequence to injuries of the thorax, than one arising from inflammation of the pleura. Whether the matter, however, proceed from the bursting of a vomica into the cavity of the chest, or from previous inflammation of the pleura, the principal object to be attended to in the cure should be the removal of that matter by means of an operation. The colour and smell of it will enable us to judge whether or not it comes from an ulcerated portion of the lungs, which secretes a fœtid and offensive fluid. In the present case, from the unwillingness of the parents to consent to an operation in the exhausted state of the child, I was prevented from using the only expedient which then remained to be tried, in this hopeless stage of the disease. It might afford matter of interesting speculation, to inquire how far the elasticity of the left lobe of the lung might have been recovered by the removal of the supercumbent weight of matter; or how long existence might have been protracted by the action of the right lung. It is evident that the chances of a recovery after an operation are much less when the disease is seated in the left than in the right cavity of the thorax, from the former containing the heart and great blood-vessels, and the circulation of the blood in them being, therefore, more readily deranged.

I have been induced to offer you the history of this case, as it seems to point out the necessity of removing the matter from the cavity of the thorax, so soon as its presence is unequivocally marked, and in as early a stage of the disease as possible, before hoctic fever has greatly impaired the strength of the constitution; and there is every reason to believe, that, in a majority of cases, the operation will be successful in establishing a cure, provided, as in the present instance, the disease be not complicated with derangement, or morbid alterations in the structure of any of the thoracic viscera.

Penicuik, November 6, 1819.

V.

Case of Cynanche Laryngea, successfully treated. By Edmund Tatham, Surgeon.

On Sunday evening, October 31st, I was requested to visit Mary O'Neil, ætat. 39,—in a very low situation of life,—of spare habit,—the mother of eight living children,—and in

the sixth month of pregnancy. Her husband stated, that, on Friday preceding, she became affected with general uneasiness and fever, together with pain in her head, that afterwards descended into her throat, and caused difficulty of swallowing, and impeded respiration; all which symptoms had rapidly increased till my seeing her, when she could swallow nothing but liquids, and those with the most painful efforts, and in the least possible quantity. Her breathing was extremely slow and laborious, attended with considerable noise. Her voice was nearly inaudible, resembling a hoarse whisper. She pointed to the thyroid cartilage as the seat of her uneasiness. No pain in the chest. Upon inspecting the internal fauces, I could discover no enlargement or inflammation. Countenance pale and expressive of great anxiety, and fear of suffocation; tongue foul, and somewhat swelled; pulse about 100, rather hard; bowels confined. Observing the affection of so severe a nature, I proposed bloodletting, but that was objected to, upon the plea of there being too much debility. I therefore sent a blister to be put over the part affected, and along with it two doses of calomel, (each containing six grains,) one to be taken immediately, and the other early in the morning, mixed in a very little sugar, and allowed to go gently down.

Next morning (Monday) I found the poor woman in the same deplorable state. She had passed a very restless and uneasy night. The medicine had produced no evacuation. Breathing and deglutition were not in the least amended. Voice was entirely gone, not even a whisper to be heard. Believing the case to be one of cynanche laryngea, as first particularly noticed in the 3d Volume of the Medico-Chirurgical Transactions, by Dr Farre, and in the three subsequent ones, by Dr Percival, Mr Wilson, and Dr Roberts, I determined upon following their depletory plan; therefore took from the arm about 18 oz. of blood; and upon hearing that great part of the medicine had been taken, ordered it to be repeated every four or six hours. At noon all the symptoms were aggravated. Every attempt to swallow was attended with the greatest suffering; for, whenever gruel, or any other drink, reached the inflamed epiglottis, it was immediately ejected, either directly, or through the nose, by the most violent coughing, that had once almost produced suffocation. She was obliged to have her head and shoulders kept constantly raised, to facilitate respiration, and enable her to get rid of viscid phlegm that accumulated about the inflamed parts. The blood drawn in the morning was buffed, but not cupped. Pulse very frequent, intermitting every fourth beat. The blister, that rose, and discharged pretty

well, was removed, and another ordered to be applied, not exactly over the pained part, but on one side of the larynx and trachea. She was bled again, to the same amount as before, after which partial syncope ensued. In the afternoon some indurated mucus was expectorated, which gave relief. At six o'clock, P. M. her situation did not appear quite so desperate. She breathed with rather more ease, and the stridulous noise was not by any means so considerable. Her pulse was now regular, though very quick and feeble. The blood removed at noon showed the buffy coat in a slight degree. Having every reason to imagine that the previous loss of blood had greatly contributed towards bringing about this abatement of suffering, I bled her to 10 oz. more, directed an enema to be administered, and wished the inhaling of warm water and vinegar to be continued, as it had been used from the first of the attack with benefit. In the early part of the night, one pretty copious evacuation, of dark-coloured offensive feces, was procured by the enema, after which she slept for a short time, and in the morning (Tuesday) she appeared something easier. Breathing and deglutition were much improved. She could now speak in a faint whisper. The pain about the thyroid cartilage still remained, though not so violent; tongue a good deal swelled; pulse more natural. The blood last drawn did not exhibit any marks of inflammation. I desired the attendants to give her broth and jelly in small quantities, frequently repeated, and, if the medicine should not act upon the bowels in the course of the day, to administer another injection. At my visit in the evening, she informed me that she continued to improve, and that the clyster had had the desired effect, in producing a plentiful evacuation. That night was passed in comparative tranquillity, and on Wednesday I found every thing wearing a favourable aspect. Respiration was performed with tolerable facility. Liquids could be taken without much effort. Considerable soreness of throat was felt, yet none of that acute pain which formerly existed. Tone of voice much stronger and clearer; pulse about 95; tongue not so much enlarged, though very sore, as was the whole mouth from the mercury, which likewise opened the bowels most freely during the greater part of the day; therefore I ordered it to be entirely discontinued, whereupon I was told that it had not been taken regularly for many hours. On Thursday all her complaints were greatly diminished. From this period she gradually, though slowly, recovered, requiring a little medicine occasionally; and when I last saw her, a month since her severe attack, she seemed grateful for what had been done, and said that slight debility alone

prevented her attending upon her family as usual, but that she became every day stronger.

That the foregoing was a complete and well marked case of cynanche laryngea appears pretty evident. The slow and laborious respiration, unattended by any pain in the chest, tumefaction of internal fauces, or cough, (unless brought on by irritation, communicated to the inflamed epiglottis, in attempting to swallow,) the impeded deglutition, the particular tone, and afterwards complete loss of voice, together with the uneasiness referred to the upper part of the throat, and the great frequency of pulse, completely established the nature of the disorder, respecting the management of which, a few remarks may not be altogether superfluous. The blood-letting was carried to larger extent, in a short time, than it would have been, from any thing indicative of its necessity in the pulse, or habit of the patient, had it not been known that this disease always requires the adoption of the most vigorous measures, as early as possible. Indeed, I regretted afterwards that I did not insist upon the performance of venesection at my first visit when it was opposed. There was nothing peculiar, either as to the size of the blisters, or their application; they certainly appeared to co-operate with the other remedies in cutting short the malady. I was led to have recourse to the liberal exhibition of calomel, (which may, perhaps, be considered to have been incompatible with the patient's situation,) from the advantage expected to be gained by its thoroughly evacuating the bowels, as well as by its *lessening* the general inflammatory action, in affecting the system. There was reason also, according to the late suggestion of a gentleman, * to suppose, that it would do good by producing a copious secretion from the salivary glands, and neighbourhood of the inflamed parts. My expectations in regard to this were, in some measure, realized, but not until the symptoms had been mitigated by other more efficacious means. The cause why leeches were not used here was the difficulty at the time of obtaining a sufficient number, yet the case did well without them; and it is worth while noticing, that no mention is made of their application in the only two successful cases out of five, published in the Transactions above mentioned, and three by Dr Baillie, in the Transactions of a Society for the Improvement of Medical and Chirurgical Knowledge. As cataplasms and fomentations have been recommended by an eminent gentleman, †

* See Mr Wood's case of Laryngitis in the 61st Number of the Edinburgh Medical and Surgical Journal.

† Vide Sir Gilbert Blane's Remarks on Cynanche Laryngea in the 6th Vol. of the Medico-Chirurgical Transactions.

it may not be improper to say, that they were used for a little in the present instance, but were obliged to be soon given up, owing to the increase of pain they produced, contrary to what might have been expected from analogical reasoning. It was fortunate that the uterine system remained in an uninterrupted state during the whole of the affection, notwithstanding its violence and necessarily severe treatment; for, had abortion taken place, it is reasonable to infer, that much would have been added to the improbability of a cure being effected in a disease that, under more favourable circumstances, generally proves fatal.

Kendal, Dec. 2, 1819.

VI.

On the Beneficial Effect of the Cold Affusion in a Case of Continued Fever. By Edward Dixon, Esq.

I was requested to visit Master Henry Hutchine (aged nine years) on the 11th of September last, and was informed that he had been in a declining state of health for some weeks. I found him labouring under the following severe symptoms of fever: delirium; the pulse 120, and hard; tongue thickly coated with a yellowish fur; the skin dry, and very hot; the bowels constipated; attended likewise with a considerable degree of deafness.

Mittr. sanguin. é brachio ℥viij. statim.

℞ Potassæ nit. ʒi. Liq. ant. tart. ʒij. Mag sul. ʒiij. Syr. croci ʒij. Aq. distil. ℥ij. M. ft. mist. de qua capt. coch. mag. 4tis horis.

Vespere.—None of the symptoms having abated, I ordered a warm-bath, which was prepared immediately. He remained in it about ten minutes, and had a plentiful evacuation from the bowels the moment he was taken out. He was afterwards put to bed between the blankets, and his medicines ordered to be continued. The blood which was drawn in the morning did not exhibit the slightest appearance of inflammation.

12th.—No diaphoresis was excited by the means adopted on the 11th; the pulse continuing as hard and frequent as before; the patient complaining of violent pain in the head, with delirium at intervals during the night.

℞. Applic. hirudines vj. temporibus, et repet. mistura.

Vespere.—There being no abatement in any of the symptoms, his parents became alarmed for the safety of their child, and a physician was called in. He ordered an aperient draught to be taken directly, and the mixture I had prescribed to be continued.

13th.—We met this morning at 11 o'clock. The draught had operated very freely on the bowels, yet the patient continued much in the same state as on the preceding evening. Six grains of the pulv. Jacob. and two of hyd. submur. were ordered to be given every four hours, with ʒss. of the liq. ammon. acet. The warm-bath was repeated.

At 8 o'clock, P. M., we visited him again, and found the pulse less frequent, and much softer, and the delirium had left him. He was perspiring very profusely.

Rep. liq. ammon. acet. 4tis horis, sine pulv.

14th.—We were told this morning that the perspiration did not continue more than an hour after we had seen him the preceding evening, and that he had passed a very restless night. Pulse 120. The liq. ammon. acet. was ordered to be continued every four hours, with the following powder: Hyd. submur. gr. i. Pulv. Jacob. gr. iij.

15th.—The symptoms became more violent than ever. Pulse 140. Subsultus and picking the bed-clothes. The physician now considered him in a hopeless state, and declined further attendance. I ordered a blister to be applied behind the neck, and a continuance of the mixture and powders.

16th.—Delirium somewhat abated; but the heat of surface remained unabated. Pulse still 140.

Mittr. sanguin. e brachio ʒviij. Repet. mist. cum pot. nit. &c. ut 11mo, cum Tinct. digital. ʒi.

17th.—The pulse continuing at 140, and there being no determination to the skin, I resolved to try the cold affusion, which I applied in the following manner:—The patient was stripped and placed in a slipper-bath, supported by his mother, whilst I poured gradually over him a pailful of water; he was slightly wiped, and put to bed between the blankets. On feeling the pulse immediately after this operation was performed, I found it reduced to 100, and it frequently intermitted; a quarter of an hour afterwards it became quite regular, and continued at 100. The excessive heat of surface was lowered to the natural standard, and the patient soon fell into a sound sleep, and continued in that tranquil state upwards of three hours, a comfort of which he had long been deprived. Towards evening the symptoms appeared to be returning with their former vio-

lence, I therefore ordered the cold-bath to be repeated, and a table-spoonful of the following mixture to be taken every four hours:

℞. Inf. rosæ ℥iiss. Syr. rosæ ℥ij. Magn. sulph. ℥ss. M. ft. mistura.

18th.—The patient had a good night, but the symptoms of fever coming on early in the morning, his parents had recourse to the cold-bath previous to my seeing him, so convinced were they of its salutary effects, notwithstanding their objections to its application in the first instance were so great. This immediately checked the fever, and I found him very comfortable, perspiring about the head and the palms of his hands. The mixture had given him three or four motions in the twenty-four hours. I desired the bathing to be continued morning, noon, and night.

19th.—Found the patient sitting up in bed amusing himself with some playthings. He appeared much better. The pulse was 96; the deafness entirely removed, and the tongue much cleaner. The alvine evacuations, however, were very dark and offensive; I therefore ordered a grain of hyd. submur., and the same quantity of pulv. ipecac. to be taken night and morning: this had the desired effect.

The cold bathing was continued night and morning for upwards of a week longer, during which period the symptoms of fever gradually subsided, and he was very soon able to dispense with my further attendance.

66, *Wardour Street, Soho, London,*
27th August 1819.

VII.

Observations on the Cure of Cutaneous Diseases by Friction. By Thomas Morison, M. D. Communicated to Dr Abercrombie.

Although the medical world is under strong and lasting obligations to the late Dr Willan, and to his pupil, Dr Bateman, for their arrangement of cutaneous diseases, in which they have exhibited much ability and unwearied industry; very little has been added to our stock of knowledge, regarding the cure of these most troublesome and vexatious complaints.

Deeming of importance every ray of light, however faint, which has a tendency to direct our path in the cure of cutaneous diseases, I shall, in a very few words, explain to you the principle upon which I have acted, and the practice which I have pursued.

I have for many years declined general practice, but having recently met with several very bad cutaneous cases, my attention has been more strongly directed to the subject than at any former period, and the success which followed makes me solicitous, through you, to lay the result of my practice before the public. The principle upon which I have acted is, that cutaneous eruptions are composed of an infinite number of minute *ulcers*, which, of course, fall to be treated as such, according to the ordinary rules of surgery. From this view it will follow, that all siccant remedies, in whatever shape, are inadmissible, and that the eruptions must be kept open and clean, till the cure is completed. This purpose has been effected by friction, and by, as far as possible, secluding atmospheric air. The means I have adopted are these: I dip a sponge in lukewarm water, and after squeezing it hard, so that only dampness remains, I cover it with oatmeal. With this the parts are rubbed for some length of time, the sponge being frequently dipt in the oatmeal, and this operation is repeated two or three times a day, according to the urgency of itching or other symptoms. After being sufficiently rubbed, the parts are washed and gently dried. Oil is then applied, by means of a varnish-brush, and the parts covered up with slips of linen. I give the preference to oil made from cow-heel, on account of its tenacity, and because it can be constantly and easily procured in a fresh state. During the friction, should a little blood ooze out, the appearance need create no uneasiness, and the consequences are rather favourable than otherwise.

The three worst cases which I have met came near to what Willan describes under the title of Psoriasis inveterata. In two the legs were the chief seat of the disease, which extended from the knees to the toes; they were much swelled, full of fissures, and scaly to an excessive degree. In one patient, the disease had existed for twenty months before I saw him, and during that period, every internal remedy and every external application, siccant and emollient, which are in common use, had been tried in vain. By the above mentioned treatment, a cure was perfected in seven weeks. But although the skin put on a healthy appearance, I recommended the continuance of friction with oatmeal, and stockings to be laced tight on the legs. It is well known that the disease is ever most apt to recur in those

parts of the skin which have formerly been its seat, and in this case, from the long continuance of the complaint, added to the severity of the weather at the time, had this precaution not been taken, the disease, I have no doubt, would have reoccupied its place. The cure in the other case was more easy, in consequence of my having seen it at an earlier period. The third case was of peculiar severity; not only the lower extremities, but the whole of the back, loins, and abdomen, were affected. A thin ichorous fluid was poured from every pore, the linen stiffened, scales were profusely formed, and the consequent itching and pain put the patient in perfect torture. The remedies were at first used with much tenderness and caution, and as circumstances admitted, more freely, till the patient was enabled to follow his usual occupations. In many of these cutaneous complaints, small tumours appear with circumscribed tops, containing a thin yellow fluid. These ought at once, by friction, to be converted into open sores, and at the same time rather severely pressed. The moderate pain occasioned by this treatment is amply repaid by the rapid advance of the cure, for, when allowed to take their own course, these tumours prove very tedious and troublesome. This leads me to mention small-pox. The small-pox, in spite of that inestimable discovery, vaccination, will, from our boasted liberty and other causes which will readily occur to you, continue, in a certain degree, to prevail in this empire. I am decidedly of opinion, that this most loathsome and fatal disease might, by the treatment I have recommended, be robbed of its principal terrors. I would propose, that, as soon as the pustules shew signs of suppuration, they should be converted into open sores, and kept in that state till a cure is performed. That fatal period, the secondary fever, would be prevented, and the chance of infection much diminished. In these enlightened days, medical practitioners are freed from the shackles with which they were for ages encumbered, and the consequence of this freedom has been the saving of innumerable lives. It would be highly presumptuous in me to give positive assurance of success. But knowing that the medical art principally consists in restraining nature, when her flight is too rapid, and in giving her energy when her course is tardy, and that the chief business of surgery, so far as regards ulcers, is to give free vent to corroding matter, and thus prevent deleterious absorption, I think myself entitled to augur well of the success of the practice I propose, and flatter myself that medical men will be induced to give the plan their serious consideration.

I have had but one opportunity of trying the effects of the

plan in foul ulcers, but it succeeded beyond my expectation; could it supersede, in sores of this description, the use of acrid stimulants, the patient would be freed from much torture.

Two young ladies, the only cases which have come under my care, whose faces had been for years affected by pimples, were cured, even although the external air could not be secluded during the day.

In the common itch, I have had no opportunity of trying the plan, but of its efficacy I do not entertain a doubt. Indeed, in all cutaneous diseases, where scurf or scales are formed, even in lepra, the plan, if well conducted, will be useful, particularly if early attention is paid.

No remedy which I have met with so effectually allays itching. If the patient, instead of applying to it, permits himself to scratch, the cure will be much protracted.

In the cases to which I have referred, little recourse was had to internal remedies. I only recommended that a pill, composed of one grain of the pilul. hydrarg., and two grains of the pilul. colocynth., should be taken every night for ten or twelve, and then every second night during the cure, followed in the morning by magnesia, or such a quantity of Epsom salts as should keep the first passages in a clear state.

The regimen I recommend is light animal food, with plain boiled rice, light boiled eggs. I forbid malt liquor, vegetables, and fruit, and salted meat, but allow a couple of glasses of wine in 24 hours. I recommend sponging the body with tepid water, and rubbing it hard with a coarse cloth, in preference to bathing.

It is proper to mention, that the patient, who had been twenty months ill, was at the Strathpeffer mineral during his cure. That this invaluable water was of service, I am fully convinced; but that local complaints, such as I have described, would have in seven weeks disappeared, I have found no reason to believe.

Having mentioned the mineral of Strathpeffer, I beg leave to state, that I should have long ere now laid before the public some account of its uncommon virtues. But local as my communications have been, the resort of company exceeds the accommodation which exists. I, however, hope this evil will be removed at no distant period.

You will, perhaps, think that I have been unnecessarily minute in some of the directions I have given. For this I had two reasons. I wished to save trouble to the medical practitioner, and was solicitous that females, whose delicacy, when la-

bouring under cutaneous complaints, often prevents their early application for medical aid, might be enabled to profit by the rules I have laid down. It is on their account, too, that I have studiously avoided technical terms.

VIII.

Case of Hydrothorax, complicated with Disease of the Heart and Lungs. By Assistant-Surgeon HENDERSON, 13th Regiment. Communicated to Dr DUNCAN, Junior, Professor of the Institutes of Medicine in the University of Edinburgh, by JOHN HENNEN, M. D. F. R. S. E. Deputy-Inspector of Hospitals.

MY DEAR SIR,

I TRANSCRIBE the following case verbatim from the reports made to me from time to time, during the patient's life, which I conceive will render the communication much more valuable than if it had been prepared for the public eye after dissection had thrown a light upon its real nature.

Yours faithfully, J. HENNEN.

Queensberry House, August 1, 1820.

CASE of D. A., a soldier, aged 32.—This man had a smart attack of splenitis in February 1820. In three days he was relieved by the usual remedies, viz. bleeding, blistering, purgatives, and spare diet. On the evening of the fifth day he complained of pain in the right side of the thorax, attended with cough and increased vascular action; these symptoms were relieved by the further abstraction of 24 ounces of blood. About this time I observed the heart to be more to the right side, and stronger in its beat, than we usually find it; there appeared also to be an unusually strong action in the aorta below the diaphragm. His recovery was slow, having been in hospital from the 3d February to the 7th March; and, when discharged, he could only be considered as a convalescent. May 9, 1820. He was readmitted into the 13th Detachment Hospital, Glasgow.

Complains of great difficulty of breathing; pain, and sense of weight about the scrobiculus cordis, and along the whole of the left side of the thorax; frequent cough, which he says is loose;

pulse 108, small, but regular in its beat; skin of its natural heat; urine scanty, high-coloured, and at times very thick; tongue white; bowels generally slow; cannot lie on the right side, without greatly increasing the difficulty of breathing; rest much disturbed by frightful dreams, and sudden startings from his sleep; on turning himself, he is sensible of the motion of some fluid in the left side of the thorax, which side, on examination, appears evidently distended, and the ribs not near so distinct to the view as those of the right; the intercostal muscles appearing to be pushed out by the pressure of fluid within the chest. On causing the patient to move suddenly from side to side, I can distinctly feel the fluid strike against the intercostal muscles, at the same time the fluctuation is as distinctly heard at some distance from the patient; the heart seems enlarged, and is only to be felt on the right side; the aorta seems in a similar state of disease, and is felt strongly pulsating after it passes through the diaphragm.

States that his present complaint commenced about three weeks ago, and imagines it to have been occasioned by his having taken a large draught of cold water during the night.

Willing to try the effect of medicine in this case, though without any hope of success, the quantity of fluid appearing too great to be carried off by absorption, a purgative was prescribed, and he was ordered to take the following draught three times a-day.

℞ Pulv. scillæ gr. i.
Tinct. digitalis gtt. viij.
Aquæ ℥i. M. ft. haust.

For the first two or three days he felt easier, probably from his having been kept in a more tranquil state than previous to admission; but at length, his nights becoming more disturbed, and his strength appearing on the decline, I consulted Dr Burke of the Rifle Brigade, and several other of my medical friends, both military and civil, on the propriety of performing the operation of paracentesis, who were all of opinion that it was the only probable chance of prolonging the patient's existence. The operation was accordingly performed, at four P. M. on Thursday the 18th May, when four pints of sero-purulent matter were drawn off from an opening between the sixth and seventh ribs. The patient was immediately relieved. Late in the evening he had a slight febrile exacerbation, which soon subsided; he had a good night, undisturbed by dreams or starting. The following day his appetite improved; he was more cheerful; skin cool; pulse continued frequent, but perfectly regular; bowels were rather confined, in consequence of which, half an ounce of castor oil was administered, which brought

away two stools. He had another tranquil night, and on the 20th was perfectly easy; but, on examining the thorax, a similar noise to that heard prior to the operation is still perceptible on the patient's suddenly moving from side to side. No fluctuation can be felt, but, as far as we are able to judge, this noise proceeds from fluid contained in the pericardium. The heart is more *in situ*, and its pulsation can now be felt, though obscurely, on the left side. The state of his pulse varies from 112 to 120, but is firm and regular in its beat. He has much less cough, and the quantity of his urine has somewhat increased, and is now clear and free from sediment.

He has been ordered light nourishing diet, and the following powder three times a-day.

℞ Pulv. digital. gr. ¼.
—— scillæ gr. i.
Potass. supertart. ℈i. M.

After four days, the digitalis and squills were discontinued, in consequence of his appetite being on the decline, and ten drops of the muriated tincture of iron three times a-day were substituted.

June 1st.—Rest becomes unsettled, but not disturbed by dreams or sudden startings; cannot lie so well on the left side, his breathing being much affected while in that position; pulse 105, and firm; has two or three stools in the 24 hours, and passes about three pints of urine in the same time; coughs but little, and his appetite is better. Ten drops of the tincture of digitalis were ordered to be taken three times a-day; this quantity was increased to fifteen.

By the 5th the quantity of fluid on the left side of the thorax appeared to have much increased; pericardium also seemed to contain fluid, and was on the increase. The pulsation of the heart became more diffused; that is to say, it could be felt at a greater distance from the apparent situation of that viscus than formerly; indeed, its action produced a jarring irregular motion of the whole thorax, especially while the patient sat up in bed. His pulse was reduced to 100, but now, for the first time, irregularly intermittent. For three days this state of the pulse continued, and the fluctuation in the situation of the pericardium became more and more distinct; the increase of its size also appeared evident.

On the 8th, the spleen was observed to be pushed down by the weight of fluid on the diaphragm, nearly on a line with the umbilicus.

On the 10th, he became so much worse, that he seemed only to have a few hours to live; but, that his latter moments might be

rendered more comfortable, the operation was again performed at nine P. M., and eight pints of fluid, of a more purulent appearance than the former, were drawn off. The result of this operation was wonderful. He passed a good night, and was able next day to take more nourishment than he had done for some days prior to the operation.

This favourable change in the state of his health continued; and, on the 15th, perceiving that the whole of the fluid had not been evacuated, an opening was made between the sixth and seventh ribs, about four inches and a half from the vertebræ, (this being the most depending point,) and five pints more were drawn off; after which, a piece of sponge tent was introduced into the wound, with a view of daily discharging any further collection that might take place.

On the 16th he felt quite easy, and had passed a better night than any since admission into hospital. Not more than two drachms of matter were discharged at this dressing.

17th.—On removing the dressing, no matter appearing to come away, a small canula was introduced, and 14 ounces of a reddish coloured offensive matter were removed, at the same time a considerable quantity of very fetid air escaped.

18th.—About three ounces of matter discharged to-day, of a more healthy appearance, and less fetid. Appetite continues tolerably keen; skin natural; pulse 96, and firm; can lie equally well on either side, and says his rest is sound and refreshing. Spleen *in situ*; situation of the heart nearly the same as prior to the operation.

20th.—Matter daily discharged continues fetid, but is not more than 12 drachms in quantity. His pulse is more frequent, and his appetite a little capricious; bowels regular. At present he is taking half a drachm of bark three times a day; his diet is, in a great measure, regulated by his own choice, and he is allowed a small quantity of diluted spirits and a pint of porter daily.

21st.—Two ounces of matter came away with this day's dressing. Pulse 112, but regular; daily quantity of urine continues the same; breathes easy. Bark continued.

24th.—Matter discharged continues nearly the same in quantity, but less fetid; pulse varies from 110 to 116; but little alteration in the state of his health. Pergt.

26th.—Yesterday there was but little discharge; during the day he appeared low and uncomfortable; his pulse was regular but frequent. During the evening he got sick at stomach, and vomited the food he had taken; passed a bad night, and he is complaining more of debility than he has done for some time.

Three pounds twelve ounces of fluid, similar to what was drawn off, but less offensive, came away with this day's dressing. His respiration has since become more difficult, and his pulse is 120, and irregularly intermittent. Supposes the bark was the cause of his vomiting.

Omittr. cinchona.
Contr. haust anodyn. et sum. ter in die.
Tinct. mur. ferri gtt. x,

27th.—Not much rest; pulse irregularly intermittent, and his respiration is also frequent and oppressed; feels his chest uneasy. Bowels regular; continues to pass from two to three pints of urine, of a pale colour, in 24 hours. Coughs more than usual, and expectorates a considerable quantity of thick mucus. Appetite bad. About 12 drachms of matter discharged to-day.

28th.—Has had a better night, appears refreshed, and in better spirits; pulse 112, firmer, and less irregular; breathes easier; appetite improved. Fourteen ounces of fluid discharged with this day's dressing. Pergt.

29th.—General health again seems to improve; pulse 108, without intermissions, but occasionally rather a lagging between each beat; breathes with ease, and continues to be able to lie on either side. Dressings were removed last night, in consequence of his feeling a little uneasy, when 12 ounces of fluid came away, and this morning eleven more.

A blister to be applied to the left side of the thorax, and kept open.

30th.—Pulse 106, regular and firm in its beat, is breathing with ease, and is in good spirits; appetite improves. Thirteen ounces of fluid discharged to-day.

July 1st.—Has had a good night; pulse as yesterday; breathes easy, and he appears, upon the whole, rather to gain ground. The cantharides produced some irritation on the urinary organs, which has again subsided; blister discharging. Only 12 drachms of matter came away to-day.

Contr. tinct. mur. ferri, et haust. anodyn.

2d.—Has had a bad night; pulse 110, but regular; breathing more oppressed than it has been for some time back, and he complains more of debility. Coughs a good deal, but his expectoration is free, and seems to be purely mucus. One pound thirteen ounces of matter, of the usual description, with many flakes of coagulated lymph, came away with this day's dressing.

Contr. tinct. mur. ferri, et haust. anodyn. h. som.

3d.—With last night's dressing 6 ounces of fluid came away, and 10½ this morning; pulse very frequent, weak, but regular; breathing becomes more and more oppressed; takes but little

nourishment, and seems rapidly declining; can lie on either side, but is generally on the left. Pergt.

Vespere.—Felt uneasy about the chest, the dressings were, in consequence, removed, and 14½ ounces of fluid came away; feels easier; pulse so rapid that it cannot be counted; extremities rather cold.

℞ Mistura camphor. ℥vj.
Æther. sulph. ʒij. M. ℥i. 2da quaque hor. sumend.

4th.—Makes no complaint; pulse continues rapid, but appears regular; is perfectly recollected, and seems sensible of his approaching termination.

Contr. mistura.

5th.—Continued gradually to sink, retaining all his faculties until a few minutes before his death, which took place without a struggle at 11 A. M.

Sectio Cadaveris.—External Appearance.—Very great emaciation; slight œdema of the feet.

Thorax.—Left cavity contained 2 lbs. 4½ oz. of matter, with large flakes of coagulated lymph floating in it; the whole similar to what was daily discharged. A pseudo-membrane, of about half a line in thickness, coated the whole cavity, and was thickly covered with purulent matter. The lung was much reduced in size; when removed from the body it weighed only 10½ oz., though it did not float in water, yet in appearance it was healthy, except at its upper and posterior part, where it adhered firmly to the pleura costalis, and contained in its substance an abscess which held from three to four drachms of pus. The lung was also adhering loosely to the pleura about the fourth rib, as also to the diaphragm. The opening made through the intercostal muscles and pleura by the first operation had completely closed, but that of the second remained open.

Right cavity contained about half an ounce of serum; lung generally free from adhesions, and seemed in every respect perfectly healthy, being of its natural size and colour, floating on immersion in water, and throughout pervious to air. When removed from the body it weighed 26 oz.—15½ more than the other lung.

Pericardium thinned, and adhering to the heart throughout its whole extent. The heart appeared to be of its natural size, as did also the vessels of this organ. The superior anterior portion of the right lung adhered slightly to the mediastinum, holding the heart to that side.

Abdomen.—Spleen of its natural structure and appearance, and perfectly *in situ*. Other viscera of the abdomen were also found in a healthy state.

In reviewing this interesting case, it appears, that 17 pints of sero-purulent matter were removed by the three punctures, and since the 15th of June 12 pints 4½ oz. came away, which, with the addition of 2 pints, 4½ oz. found in the chest "post mortem," makes the enormous quantity of 31 pints 15¾ oz. removed in 47 days.

On dissection, we were struck with the state of the heart and pericardium, having throughout regarded the former as enlarged, and the latter as containing a considerable quantity of fluid. Now I am convinced that the latter circumstance arose from our mistaking the small space that was unoccupied by the fluid in the chest for the extended pericardium, and had we punctured, as was at one time proposed, we should have done nothing more than we afterwards did, viz. evacuated the matter contained in the left side of the thorax.

During the course of the disease, the pulse varied much, and frequently without any evident cause. Respiration after each puncture was always relieved, and the patient could then lie on either side; but, previous to the evacuation of the fluid, I may say he could only lie on the affected side, the weight of fluid while on the right pressing too heavily on the sound lung to allow that organ to perform its natural functions.

From a circumstance that occurred during the first operation, I am inclined to think that the pseudo-membrane was then only forming, and very loosely attached to the pleura. In this operation the puncture was made by a lancet, and although the pleura was decidedly perforated by this instrument, yet, to our surprise, no fluid followed; a probe was then introduced, which seemed to break down the obstacle to the escape of the fluid, which, no doubt, was the membrane in question.

Remarks by Dr Hennen.

If proofs were wanting of the difficulties which the physician has to encounter, in distinguishing during life the real nature of diseases of the heart, we have a striking instance in the preceding history. I had an opportunity of seeing this very interesting case, at periods favourable for forming an opinion, viz. some hours *before* the second paracentesis was had recourse to, and early on the second day *after* that operation, when the fluid had not had time to collect again in any quantity in the general cavity of the thorax. In common with the reporter, and the other medical gentlemen who saw the patient, I never doubted of the existence of water in the pericardium; and I conceived that the case afforded a very favourable opportunity to ascertain the exact state of the symptoms which characterize the pure unmix-

ed dropsy of that sac, an occurrence so rare, that Morgagni doubts whether he ever saw it; * and Professor Frank of Vienna † asserts, that, in 100 cases, he never met with one where the fluid was contained *solely* in the pericardium. Mr Henderson's account is sufficiently indicative of the patient's state up to the 10th;—when I returned to Glasgow on the 12th, I made the following note of the case. The countenance of the patient was leucophlegmatic, his lips were somewhat livid, his eyes dull, and the general cast of his features expressive of having suffered great anxiety; while his motions and gestures were performed with considerable caution, as if to ward off some sudden painful sensation which might eventually occur. He lay on his back apparently without difficulty, he raised himself into the semi-erect posture, without exertion or inconvenience, and resumed the recumbent position with equal facility; nor did he seem to give a preference to lying on one side rather than another, for he once lay down on the right, and once on the left side, while I was examining him. While he lay on his back the pulsations of the heart were strikingly visible on the *right* side, extending over a circle, the diameter of which was four fingers' breadth, and its central point directly corresponding to the middle of the fourth rib. These pulsations at once suggested the idea of the heart beating in a bag of water, and the sensation conveyed to the hand, confirmed the opinion thus suggested to the eye, while the ear was forcibly struck with the sound of dashing water, occasioned by the patient's spontaneous motions. Although at the time no one doubted that *all* the fluid had been removed from the general cavity of the thorax, and that consequently this noise was produced entirely from the agitation of the fluid contents of the pericardium; yet dissection proved that a *part* of the water was prevented from running off by the interposition of the new formed membrane; and the noise was no doubt greatly increased by the admission of air through the puncture. A jarring or thrilling sensation was perceptible to the hand applied over any part of the thorax; and when placed lower than that cavity, and in the line of the descending aorta, the thrill was lost in a distinct stroke, apparently proceeding from the action of that vessel. When the patient attained the sitting posture, the circle of pulsation upon the right side was somewhat decreased, but when he lay down again it regained its for-

* Epist. 16. Article 20.

† "De Curandis Hominum Morbis Epitome," Tubingen, 1811. Tom. VI. p. 241.

mer size. The left side was in a state of œdematous tumefaction, but not so much so as before the operation; the posterior part of the thorax was still œdematous to a considerable degree. In whatever position percussion was attempted, the thorax emitted no particular sound. The pulse was 94, firm, and not at all indicative of the great organic disease which existed. The respiration, although not natural, was far from being hurried, and the heat of the skin was neither greater nor less than I should have expected in a person confined to bed with any other chronic complaint. On inquiring into these symptoms, a knowledge of which could only be derived from the patient's own communications, all his uneasy sensations seemed to have been so completely forgotten in the relief he experienced from the operation, as not to be noticed. "The oppression and load from the water was," he said, "quite removed, and he only felt weak and weary of his bed."

So effectually was I deceived by the sound of the dashing water, that I never allowed the idea of adhesion of the pericardium to enter into my speculations as to the cause of some of the symptoms of the disease, although I was well aware of the fact, that, in a great majority of cases, attended with pulsations in the epigastrium, that morbid state is the cause of these phenomena; for the heart is not only curbed in its motions, but the diaphragm is alternately elevated and depressed during the alternate contraction and dilatation of the heart, by which the repercussions of that organ affect the liver, and produce a pulsating tumour in epigastrio.* We have in military practice frequent occasions of seeing these pulsations. Sometimes in our examination of recruits or deserters, we find them merely as a nervous affection of the arteries, proceeding from fear, or from the effects of intoxication, but much more frequently they are the products of organic disease, accompanied with a care-worn unhealthy aspect, and although these persons often deny that they had ever been previously ill, the marks of frequent venesection in their arms, and the cicatrices of extensive blisters on the thorax, frequently prove that they had been under medical treatment for complaints of the chest. In veteran soldiers, also, they frequently appear, and can often be traced to previous inflammatory affections, the product of exposure to cold when overheated, and to intoxication. Hence, they are often met with in troops arrived from the West India Islands; and it is highly

* See Burns on the Heart, p. 62. Corvisart, Chap. I. sec. 2. Consult also the works of Lancisi and Vieussens.

probable that the disease of D. A. first came on under the appearance of splenitis, which he had long neglected, and perhaps aggravated by excess in spirituous potations, for he did not belong to the garrison of Glasgow, and consequently had not undergone the weekly health inspections which are now universal in the army.

Sometimes these diseases can be traced to local injuries, occurring in unhealthy habits. The first case of epigastric pulsation which I ever saw appears to have been of this kind. It arose in an old drunken dragoon, and was traced to a series of ineffectual attempts which he had made to spring upon the back of a kicking horse. The man died suddenly, in some time after I first saw him, and the military system of that day (1803) not enforcing dissection, I had no opportunity of examining the case. Since that period, however, I have had frequent occasion to inspect the bodies of persons known to have laboured under abdominal pulsation, but I never was able to detect disease in that system of vessels, and hence, I believe that they are much oftener the media through which morbid appearances are transmitted, than the actual site of disease themselves. Although tumours connected with, or in the vicinity of the arteries of the abdomen, occasionally occur, and communicate to the hand the sensation of an aneurismal affection, the cases where these sensations proceed from diseases of the heart are much more numerous, and adhesions of the pericardium I have found the most frequent of any.

In the case now before us, it was proposed to tap the pericardium, but I was not disposed to encourage the trial, for the state of the patient seemed to me to be such, that no possible advantage could have accrued to him from the experiment, as there was every probability of the existence of some organic affection of the heart and aorta. There appears to be some other considerations which should be taken into our calculation, before we have recourse to opening the pericardium, viz. the difficulty, if not impossibility, of supporting the parts, as we do when we tap the abdomen, and thus preventing the consequences of sudden depletion. In the paracentesis of the general cavity of the thorax after acute diseases, we can press the abdominal contents upwards, and the lungs, by their expansion after the fluid is removed, assist our purpose; but after long continued disease, dissection shows that the lungs are often disorganized and reduced to a very minute size, solid, shrunk, and incapable of resilience; besides which, it is doubtful whether the pericardium would be sufficiently elastic soon to recover itself so as to compress the heart as it naturally does.

To perform the operation, Senac proposed to push the trocar into the space between the third and fourth ribs, entering the point of the instrument two fingers' breadth from the sternum, and carrying it obliquely towards the origin of the ensiform cartilage, along the line of the ribs. Desault operated between the sixth and seventh ribs, opposite the apex of the heart; he conceived that he had entered the pericardium, but on dissection, it was found that he had penetrated an artificial sac, the product of inflammation. Laennec recommends us to trepan the sternum above the ensiform cartilage, but without accompanying his recommendation with any remark which might lead to the supposition that such a proposal had ever been made before. The trepannation of that bone, however, for the purpose of removing fluid contained in the pericardium, is a proposal as old as the days of Riolanus, who, in his Anthropographia, published at Paris, 1649, expressly asks, "Quidni ad locum adhesionis pericardii sterno, pyroticum escharoticum apprimetur atque tenuissima terebra sensim pertundetur, ut inclinato et prono corpore illius aquæ stagnantis portio exhauriatur?" Senac mentions the name of Riolanus, but with a looseness of quotation, almost peculiar to his countrymen, he never notices the previous steps of the operation, but merely says, in speaking of the point of perforation: "C'est à un pouce du cartilage xiphoide qu'on doit la tenter, selon cet ecrivain." * But even before the time of Riolanus, boring through some of the bones which surround the thorax had been practised, for we find that Hippocrates, in tapping that cavity, preferred perforating through one of the ribs rather than opening between them, and he then plugged the opening with a tent of soft sponge or flax, and let off the water gradually. †

A brilliant, though ultimately unsuccessful, operation, lately performed at Paris, has suggested the idea of attempting a radical cure of hydrops pericardii by injection, upon the same principle that we operate in hydrocele; but surely a moment's reflection upon the consequences of that complete adhesion, on which alone depends the hope of cure, will prevent an experiment of this kind from ever being had recourse to, although

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* See Senac, Traite de la Structure de Cœur, 4to, Paris, 1749. Tom. II. Liv. 4. Chap. 6. Desault Œuvres, par Bichat, Tom. II. p. 304. Laennec de L'auscultation mediate. Tom. II. p. 396. Riolanus Anthropographia, Lib. 6. Cap. 7. Nicholas Culpepper translated this work in 1657, and enlarges upon the propriety of tapping the pericardium in dubious cases.

† De Morbis, Lib. 2. Cap. 24. De Inter. Affect. Cap. 24, pp. 576 and 655. Opera Hippocrat et Galeni. Folio edit. Charter. Paris. 1679. Tom. VII.

it is not to be denied, that, in some cases, adhesions have been detected on dissection, where no palpitation had ever been complained of during life.

In no organ of the human body are we so often deceived in our diagnosis of disease as in the heart and its appendages. The researches of modern pathologists bid fair, it is true, to elucidate this obscure part of our profession, but I am convinced that many of our most current opinions still continue to be formed more from speculation than from actual research. We know the functions which the heart and each of its parts execute, and we form plausible conjectures of what would be the consequences of a cessation or an imperfection of any part of the performance, but we do not, and we cannot, know either the existence or the effects of minute derangement of that nice balance which regulates circulation, respiration, and animal heat. We are often deceived, even where the derangements of healthy action are more palpable, and where the causes which have given rise to them might fairly be supposed to be more cognizable to our senses. The records of our profession abound with such cases, but I shall select the following, as it appears more closely connected with our present subject than many others which I might produce, and fully shows how often we are destined to discover in the dissecting-room, appearances which we had never anticipated in the bed-chamber.

P. C., aged 25, originally a labourer, but for the last two years a soldier, of a slender but muscular make, tall, and rather narrow chested, applied to be received into hospital on the morning of the 14th of February 1820. He was then labouring under severe dyspnœa, with pain in the right side of the chest, and his pulse was so frequent and irregular as to give reason to dread approaching dissolution. He was immediately bled from a large orifice, and the blood was allowed to flow until he felt relief from pain, which did not take place until three pounds were removed; six additional ounces were allowed to flow, and he then complained of faintness. The good effects of this venesection were soon apparent, for the heat of his body, which had been very unequal, but generally below the natural standard, become more uniform, and his pulse could be counted. It was 92, and irregular; a few strokes hurried, and then a few slower. The breathing was still anxious, and he was obliged to be supported nearly in the sitting posture. The heart palpitated violently; and at each stroke a fluctuation of fluid within the thorax was clearly discernible. A large blister was applied over the seat of his pain, the pediluvium was directed, and a mild purgative was administered. By noon the bowels were opened; and, although the breathing was still anxious, and the pulse as before, the pain was relieved. By eight o'clock in the evening the pulse

had become more distinct; he vomited once, and had two bilious stools. The night was passed without sleep. Next day (15th) the breathing was still laborious, but the pain had not returned. He coughed, but did not expectorate. He was ordered an antispasmodic mixture, with nitrous ether; and at noon, as a violent attack of spasmodic dyspnœa came on, the venesection was repeated, but, without affording much relief; the pulse, however, fell to 80, still irregular, and with strongly marked fluctuation in the thorax. A large blister was applied over the whole chest, and a pill of squill, calomel and digitalis was occasionally administered, to which a small portion of tartarized antimony was afterwards added. He passed a very restless night, and next morning (16th) he vomited after his pills, and began to expectorate, rather of a purulent appearance: the breathing still very difficult. In the evening he became very anxious and restless; the pulse was indistinct, and the pulsations of the heart were so violent as to be plainly audible. Eight ounces of blood were allowed to flow from the vein which had been opened the preceding day. The night of the 16th was passed as restlessly as the preceding; and on the morning of the 17th he was evidently moribund, and expired at four o'clock, P. M.

The body was examined nineteen hours after death, and presented the following appearances:—In the abdomen the liver was a good deal enlarged, the gall-bladder was filled with a substance like tar. No other morbid appearances were detected in this cavity. The general cavity of the thorax was found *perfectly free of fluid*, but the pericardium was distended with one pint two ounces. The heart was small and pale. The lung on the right side was collapsed, of a dark sphacelated appearance, and contained in its superior portion the sac of a large abscess, in which a small quantity of matter was still contained. The left lung adhered in every part to the pleura costalis, and its substance was tuberculated throughout, or filled with vomicæ.

Here was a case of hydrops pericardii, without any effusion into the cavity of the chest, and a diseased state of the lungs, which rendered it a matter of surprise how the function of respiration could be carried on. The man had laboured under pulmonary disease before he enlisted, and he had an attack of pneumonia on first joining his corps, and another in the November preceding his death, for which he had been treated by a country practitioner. Of this no other traces were left behind except that his breathing was apt to be hurried on exertion; and so little was the real state of his disease apprehended, either by himself or the surgeon of his corps, (Mr Hamilton, 13th regiment, to whom I am indebted for an account of the case,) that he applied for, and had actually received permission, to visit his native country, Ireland, and was to have set out

on his journey the very day on which his death illness commenced. So rapidly did the symptoms then proceed, that all medical aid was in vain. His life, indeed, was evidently protracted by the bleeding, but such was the diseased state of the organs within the chest, that neither that, nor any other operation, could have averted his fate. It would be in vain to offer a conjecture as to the date of the dropsical effusion, but the quantity of fluid was infinitely too large to allow us to suppose that it had been of recent deposition.

I know of only one other case on record of hydrops pericardii unaccompanied with effusion into the general cavity of the thorax; it is related by Sidren, in the "Acta Med. Suecicorum," Tom. I. p. 407, but it differs from the present in as much as no appearances of disease either in the lungs, heart, or great vessels, were discoverable after death. The quantity of fluid in Sidren's case was about the same as in Mr Hamilton's.

IX.

Observations on the Use of Nitrous Acid as a substitute for Blisters. Communicated by Dr KENNEDY, F. R. S. E. and Fellow of the Royal College of Physicians, Edinburgh.

Extract of a Report from Mr Assistant Surgeon KILLETT, *of the 3d Regiment Light Cavalry, to the Medical Board, Madras, dated Mhow, 4th November* 1818.

In my report to the Board for the month of July last, I gave an account of the spasmodic cholera, as it came under my observation, during the short period it was prevalent at this place.

In that report, I recommended bleeding and blistering as the remedies chiefly to be relied on, considering the disease to be a spasmodic affection of the stomach and bowels, accompanied with inflammation, and quickly followed by a diminution of the powers of the brain; and I hinted that the actual cautery might be employed with advantage, as producing a more instantaneous counter-irritation, than the slow acting emplastrum lyttæ. Since writing the above mentioned report, I have been informed by Mr Assistant Surgeon Powell of the Bombay Detachment, now in camp, that he has used the nitric acid to produce a quick counter-irritation, and with the best success. Of forty-one cases which Mr Powell treated in this way, six only died; and of nine

cases treated by an officer commanding a detachment, without medical aid, one only died, and this a woman six or eight months gone with child. The great good effects of this sudden and powerful counter-irritation were strikingly illustrated in the case of a European, who received immediate relief to the burning sensation at the stomach on the acid blister being applied; and who, the next morning, being annoyed with spasms of the extremities, requested the same remedy might be applied; it was accordingly done, and so great was the relief obtained to one leg, that he cried for God's sake to apply it to the other, similarly affected.

Another striking instance was that of a Lascar, seized while cutting wood a koss from camp, and who, on being brought in, was supposed to be past recovery, his stools passing away involuntarily, pulse imperceptible, and extremities cold; the acid blister was applied to the stomach, and the patient got well.

Mr Powell uses two parts of acid to one part of water, and with this mixture rubs the surface over the part affected, to such an extent as may be thought necessary; as soon as the patient complains of pain, he neutralizes the acid, by washing the surface with a solution of salt of tartar; the cuticle can now be easily detached, and leaves the cutis raw, upon which he applies a common blister to keep up the irritation. He employs, besides, small doses of camphor and opium, frequently repeated, to allay the irritation at the stomach; this, with emollient enemata, forms his whole method of cure. I will conclude with saying, that the (forty-one) patients treated with the acid blister were all admitted in such a state, that no blood was attempted to be drawn.

Letter to S. Heward, *Esq. Superintending Surgeon, Presidency, from* William Scott, *Surgeon, Madras.*

In a letter to the Superintending Surgeon, dated 8th April last, I noticed some of the effects of the nitrous acid, used as a substitute for cantharides blister in cases of cholera.

I have now the honour to enclose some remarks on the more extended use of that application, which, should you think them worthy of notice, I will be thankful to you to forward to the Medical Board. With this remedy in our hospitals, it should no longer in urgent cases be observed in the journals, that the "blister did not succeed," or, "the blister was applied, bu could not be kept in its place," for no circumstance can preven the *application* of the acid, and its *action*, when applied, cannot possibly fail.

Saint Thomas's Mount, 9th July 1819.

Remarks on the Use of Nitric Acid as a substitute for Blisters, by Mr Assistant Surgeon KILLETT.

We hear much of the successful application of firing by the native practitioners; and it is common to hear a farrier say of a horse, "blister him, and if don't do, fire him, which never fails." The cautery is an ancient remedy fallen into disuse, but which nevertheless appeared to possess peculiar virtues.

Though, admitting the fact, that firing was more efficacious than cantharides blisters, I had no defined notions in what this superiority lay, but I could not impute it merely to difference in the *degree* of action, for the blisters used with horses seem often more painful than firing.

The substitution of nitric acid for cantharides blisters in cholera has given me opportunities of making some observations on its mode of action, which appear to me elucidatory of the subject.

Seeing the quickness of action of the acid in cases of cholera, and that it could be applied under any circumstances of frenzy or unruly conduct, I have been led to employ it in those cases of severe disorder in the stomach and bowels, consequent on excessive drinking, where the promptitude is of vital importance, and where common blisters are altogether useless and inapplicable; also in cases of acute and sudden pain from other causes, in hepatitis, and so forth; wherever the disease depends on spasm, or nervous irritation, the relief is *wonderfully sudden*; and when it is connected with inflammation, I think it is fully as certain, and more speedy, than after common blisters.

The pain, upon the whole, is represented as sharper than that caused by blisters, though some patients say not; but the chief point is, that it reaches its acme in two minutes; it continues severe for three hours, and in three more altogether ceases. It is in this *quickness of action* that it resembles the actual cautery, and to this therefore I impute the greater efficacy of both, for, it is reasonable to conclude, that the effect will be as the intensity of the cause; we may compare it to the shock produced by the *sudden* affusion of cold water on the surface, which, under a different management, may be altogether avoided.

But the acid possesses other advantages. Whoever has felt the tedious progressive pain of a blister, the wearisomeness and irritation produced, and the agony of motion; the sickness and disgust of the dressing, and the after sickly smell, itchiness, &c., will be disposed almost to suffer any pain rather than submit to a repetition; it is also obvious, that all these circumstances must have their bad effects on the patient. But the action of the acid

is essentially different; the application is over in a few seconds; the pain, though severe, is at least soon on the *decrease*; is not aggravated by motion, nor by friction; no dressing is required, and the patient is often free from all the trouble of his disorder before the cuticle is abraded.

I have not seen any occasion for the after use of cantharides. If the acid has been diluted with half its bulk of water, and applied lightly with a feather, the cuticle is stained of a straw or sulphur colour; in three days it begins to pucker, with a little serum underneath; a slight red ring surrounds the parts, and the cuticle comes off on the 4th or 5th day, leaving the surface like a common blistered part, with a few deeper streaks, where the cutis vera has been touched. But if the acid has been used undiluted, or has been longer applied, the cuticle becomes of a deep brown; it does not rise or pucker, as the subjacent vessels necessary for throwing it off, appear to be destroyed; the red ring forming on the 3d day becomes deeper and broader, and a portion of the true skin, of the thickness of sheep's leather, begins to separate in six or seven days. The parts are rather tedious in healing, but this, taking it in all its bearings, is no great disadvantage.

As no serous discharge ensues, the acid cannot be substituted for blisters, in cases where *this* discharge is the motive of their application; neither, of course, can it be admissible when a continued rather than intense counter-irritation is thought to be indicated. But in all urgent and acute cases, and especially where the patient is unruly or restless, the acid appears to me to possess advantages sufficient to recommend its general adoption in practice.

Saint Thomas's Mount, 30th June 1819.

X.

Case of Anasarca after Scarlatina successfully Treated. By William Steele, M. D. Canongate, Edinburgh.

On the 13th October 1819, Mrs Burns, Canongate, was attacked with scarlet fever. The heat of skin was greatly increased, and all the other symptoms of pyrexia violent. The usual remedies were used; to wit, bleeding in the first instance, the antiphlogistic regimen, with diaphoretic medicines and laxatives. She was convalescent on the 20th.

I was on the 25th sent for, and found her affected with an œdematous swelling all over the body; urine small in quantity, high-coloured, and depositing a farinaceous sediment; pulse 110, and irregular. I ordered the following medicines.

℞ Pulv. jalap. com. ʒi. Submuriat. hydr. gr. x. M. Capiat statim.

℞ Pulv. scillæ ʒss. Submur. hydr. gr. viij. Micæ Panis q. s. ad formandas pilulas xviij. Capiat i. ter in die.

Sumat etiam tinct. digit. gtt. x. ter indies.

On the morning of the 14th, her breathing remained the same; she could not lie in a horizontal posture; cough and an irregular pulse; passed since yesterday about ten ounces of water.

15th.—The swelling is considerably reduced; her breathing easier, and her pulse more regular; had made about lb. iss. of water, and slept better during the night.

Continued the medicines.

16th.—The swelling is much removed; sleeps well, and the urine increased in quantity.

Medicines continued.

17th.—Is recovering rapidly.

Continued the medicines.

20th.—Is convalescent.

Omitt. medicam.

On the 6th November, I was again sent for. I found the swelling returned to the full extent as before. Difficulty of respiration; an impossibility of lying in a horizontal posture; pulse 110, and irregular. Ordered the following medicines.

Pulv. jalap. comp. ʒi. Submur. hydr. gr. viij. M. Capiat statim.

The following was also given.

℞ Tinct. digitalis ℥ss. Acet. scillæ ʒij. Spr. ætheris nit. ℥iij. Aq. cinnam. ℥iij.

Mittr. sanguinis ex brachio ʒxv.

Pilulæ sciliticæ c. submur. hydr. tertia quaque hora.

7th November.—Dr Abercrombie called on her in my absence; ordered the following medicines in a note he left for me.

℞ Tinct. digitalis gtt. cxl. Sp. Ætheris nitrosi ʒss. Acet. potass. ʒvi. Aq. fontan. ℥vij. M. Capiat cochlear. i. tertia quaque hora.

℞ Pulv. jalap. ʒss. Pulv. submur. hydr. gr. viij. M. Capiat statim.

Pilulæ scilliticæ ij. mane et vesp. Venesect. rep.

8th.—Much relieved in her breathing from the bleeding, and the effects of the diuretic medicines. Pulse more regular, and fallen to 90; has been able to lie on her side for two hours at intervals during the night.

9th.—Is much better; swelling decreasing; her urine since yesterday increased lb. ijss.

10th.—Continues to recover; pulse 80; sleeps well in the horizontal posture; urine lb. iij.

Medicines continued.

11th.—Continues to improve in all her symptoms.

Continue the medicines.

12th.—Improving; urine lb. iijss.

13th.—Sleeps; improving.

Continue the medicines.

14th.—A little œdema still remaining on her ankles.

15th.—Recovering.

Continue the medicines.

17th.—Convalescent.

Continue the medicines.

20th.—Omitt. medicamenta.

XI.

Case of Dilated Heart, attended with an Hepatic Affection. By Ebenezer Gairdner, M. D. Dunfermline.

October 18, 1819.—William Templeman, æt. 32, weaver, Dunfermline, about 5 feet 11 inches high, fair complexion, blue eyes, body of a strong and muscular appearance, without much apparent emaciation. He reports, that he had been in general a healthy stout man before the present complaints came on, about three years ago. He acknowledged himself to have been addicted to considerable intemperance at times, particularly in ardent spirits. He has been, during his illness, at different times under the care of two medical gentlemen; had got some purgatives; his mouth had never been affected by any medicines which he had taken. For these last six weeks he had given up attending either of these gentlemen; but he had, during this time, been freely bled by an apothecary of the town five different times, and had taken some purgative medicines, without any relief.

He now complains of great pain and oppression, with fulness in the two hypochondriac and the epigastric regions; feels easier sitting than in the horizontal posture, but no peculiarity on lying on either side, nor is pain felt extending to either shoulder. On placing my hand on the left hypochondrium, an unusual and strong pulsation is distinctly felt, corresponding with that of the heart and wrists, which is 120 or 122, uncommonly full and strong, yet regular. He had with great difficulty walked about the third part of a mile to ask my advice. Respiration rather hurried and oppressed; countenance pale, or rather somewhat livid; expression anxious; conjunctiva whiter than natural, and partaking of the colour of the face; tongue somewhat white, but moist; not much thirst; bowels reported to be torpid.

Statim V. S. ex brachio ad ℥xxiv.

About 28 oz. of blood drawn with some relief, but which was only temporary.

℞ Submur. hyd. gr. vi.
Pulv. rad. jalap. gr. xiv. M. ft. pulv. mane sumend.

Oct. 19.—The powder has brought off a great deal of lumpy feces, which contained some matter, having the appearance of half-digested seeds. Pulse 98, full; other symptoms as before noted.

I now carefully examined him when lying in bed, and found a very considerable fulness and tumefaction, tense and somewhat hard, in the regions above mentioned, which, on the slightest pressure, gave great pain.

The powder (calomel comp.) was ordered to be repeated for several successive mornings, and alternately with

℞ Sulph. potassæ c. sulphure ℥ss.
Sulph. magnesiæ ℥i. Solve in aq. fervent. lib. iij.
Sumend. in vicibus part. ad dejectiones plenas;

which gave at times some relief as to the uneasy sensation of fulness. He would not allow a blister or seton to be applied. I enjoined great temperance, and a spare diet of food of easy digestion, bordering on the antiphlogistic regimen.

28.—Symptoms by no means abated. Bowels had, since the last report, been kept open by the above noted cathartics; otherwise there was much torpidity; though the feces were at times somewhat more natural, yet they were still inclined to be lumpy, and of the same kind as above noted.

Nov. 1.—I now ordered, after one or two more brisk purgatives, a course of mercury, in the forms of pill and ointment, to be administered. Diet to be a little more nourishing.

7th and 8th.—The mouth began to be somewhat affected, on which the pill was omitted, and a smaller quantity of the ointment rubbed in. About the 15th the ptyalism and irritation was reported to me at Edinburgh (for I was obliged to be in Edinburgh for a few days) by the apothecary to be so severe, that I advised that the mercury should immediately be altogether omitted.

19th.—I found that the ptyalism had nearly ceased; the symptoms originally noted by no means alleviated, with a considerable and marked increase of prostration of strength, yet no apparent emaciation of body; pulse 100, feebler than formerly, and regular; countenance very anxious; a disposition to sweating; the sweat now broke out profusely in my presence, on his taking a full inspiration; feet œdematous; dyspnœa on lying horizontally; stools as before, and only to be procured by cathartics; urine nearly natural, rather sparing in quantity; tongue moist; some thirst; sleeps little from the pain and sense of fulness. The pil. scillit. and a drink made of the supert. potass. and the occasional and free use of the compound mixture of salts were ordered. At his earnest request, a small wine-glassful of gin, in the form of weak *toddy*, was allowed to be taken once a-day.

28th.—Œdema of feet less; urine more free; other symptoms as before; pulse 92, strong; the pulsation felt also strong in the left hypochondrium; considerable craving for food, which had been occasional throughout.

The squill and the cream of tartar drink omitted. Continue the free use of the solution of the compound salts daily. To allay pain and irritation, and to solicit sleep, the tinct. opii, and embrocation with opium, were allowed to be freely used. Spare diet, as on the 19th October, was again enjoined.

December 1st.—Symptoms nearly as last reported; strength, however, not apparently diminished; pulse 96, strong and full; œdema not further reduced; bowels only to be moved by the compound salts, or the compound calomel powder, which brought off feces as before noted. Digitalis, one grain of the powder, in a pill, was now ordered to be taken twice a-day, which, on the 8th day after its use, reduced the pulse from 96 to 86, and suddenly, since yesterday, to 74, and of much less strength; œdema of legs rather diminished; urine free.

15th.—He is in great pain; great fulness and tension felt at the regions above noted, and also as if by the arch of the colon; countenance very anxious, respiration hurried; pulse irregular; some considerable convulsions, and he seemed about to sink in my presence. Ordered an enema to be immediately administered, with embrocations, and to be followed, if possible, by full

doses of the compound powder of calomel, which brought off much feces of the same nature as that before noted, with some blood, and which gave great relief.

16th.—The powder was this morning repeated with good effect. He has rallied somewhat, and is now comparatively much better. Pulse 82, full and regular. Ordered the powder and the compound salts to be used freely; and also the pil. digitalis, as may be necessary.

25th.—Nearly as by last report; bowels kept pretty easy by the powder and salts. The pil. digitalis has been taken again for some days past.

January 3d, 1820.—He has again fallen back, reported with symptoms as noted on the 15th ultimo, with some convulsive fits; pulse now 86, strong and regular. Repeat the pil. digitalis; continue the compound calomel powder, and the solution of compound salts.

4th.—He has again rallied a good deal.

6th, 12 o'clock M.—He continues better, but the original symptoms continue as they were; he is in good spirits, and walking about.

7th.—It is reported, that, soon after my visit, towards one o'clock P. M. yesterday, he said that he was hungry, and shewed some impatience, and a desire to have his dinner before the usual hour. He supped three full halfmutchkins (about 21 ounces) of broth made of pork, barley, and *greens*, with upwards of half a pound of the meat; about three hours afterwards, with equal avidity, he took two cups of tea, and two rounds of a threepenny loaf of bread with butter, and afterwards a small wine-glass-full of gin, in the form of *toddy*, not much diluted. He afterwards slumbered, sitting upon his chair (which he had always been disposed to do, for a short time after taking his dinner, or any hearty meal) for an hour or so. About 10 o'clock he said that he felt the fulness and tension at the epigastriac and hypochondriac regions very bad, otherwise, he declared himself to continue to be rather unusually well, as he had been throughout the day. He then took a cupful of the solution of the compound salts, which he immediately vomited (rather an unusual occurrence with him) upon the floor. The matter vomited, his wife, an intelligent woman, particularly examined, and she remarked it to be mere fluid, mixed with a good deal of phlegm, and tinged with some blood, but none of the food which he had taken appeared, at which, at the time, she rejoiced, suspecting that he had eaten too much. He afterwards tried to lie down in bed, but remained very uneasy. About 4 o'clock this morning, after that he had been quiet, and

had gotten a little rest, he said that he felt a strange sensation and much swelling at stomach, losing the power of his feet and one arm; yet he was quite sensible of what was said and done to him. He soon also lost the power of speech, and died.

8th.—*Sectio Cadaveris.*—In this I was assisted by Dr Spence and Mr Macara the apothecary. It was by considerable address that permission was granted to do this; a brother of the deceased attended, which circumstance curbed somewhat the freedom of our investigation.

The appearance of the body throughout was natural; no discoloration of any part, only much œdema of the lower extremities.

Abdomen.—Some effusion, but in no great quantity; omentum nearly absorbed; peritonæum, mesentery, and intestines natural; little or no flatus; stomach empty, and quite healthy.

Liver much enlarged and rather hard; colour nearly natural; some lymph on the upper surface of the left lobe, and adhering to the diaphragm. The organ extended more than usual into the left hypochondrium, as if the left lobe was more than proportionably enlarged; no appearance of ulcer or abscess, or of any destruction; gall-bladder full of bile, nothing particular; weight of the liver and gall-bladder $5\frac{3}{4}$ lb. Dutch, or $100\frac{6}{8}$ ounces.

Spleen.—Enlarged, and much hardened; weight $1\frac{1}{4}$ lb. Dutch, or $21\frac{7}{8}$ ounces.

Pancreas was with some difficulty discovered, it being so small as only to be distinguished, yet it shewed no disease. Kidneys full size, and quite natural. Neither the liver nor the spleen, when cut into, shewed any marked congestion of blood; nor did any of the vessels of the chylopoietic viscera appear to shew any such thing.

Thorax.—Some effusion, but not material.

Heart, very large, and of proportionable size and texture in all its parts and cavities, rather wanting a due proportion of fat; on its surface there appeared no lymph or any adhesion to the pericardium; some little ossification of the sinus Valsalvæ of the pulmonary artery, of an oval form, of three-fourth parts of an inch in diameter. Indeed, the general appearance of this organ, as to size, was more that of the heart of an ox than that of a man, yet we were struck on viewing it in all its parts, with its singularity, and beauty, and due proportions, as if the organ had been looked at through a glass of a considerable magnifying power: weight $2\frac{7}{8}$ lb. Dutch, or $48\frac{1}{8}$ ounces. We regretted much that our attendant would not allow us to carry it away.

On the whole, there was no appearance of a general or particular emaciation of the body excepting what is noted.

On afterwards inquiring further into the preceding history of this man, and before those complaints commenced, it was said that he had been considered a bold and active man, and inclined to dissipation. When in bed he preferred to sleep rather in the sitting than in the recumbent position, which circumstance was by his wife and friends imputed to a bad habit which they imagined he had acquired from his mother, who had been observed to sleep generally in this position; and during sleep he very often, when in his usual health, was observed to be subject to night-mare and startings, and to occasional convulsive affections. It was observed, generally, that his appetite was very good, rather voracious; skin also moist, and perspiration freer than usual when he was making any moderate exertion, and it was remarked to have a strong fetor, and to stain his linens so much that they could not be washed so clean as other linens: his strength was not, however, impaired by such perspirations, nor by any considerable exertion.

Such is the history of the case, so far as could be obtained. In a pathological point of view it may be considered of some interest. From the first view of the patient, and observing the symptoms as marked on the 18th and 19th of October, I was inclined to note it as a case of hepatitis; the indications did not then appear to me so decided as to justify the conjecture of an organic affection of the heart, unless the continued strength of the pulse, and the pulsation felt at the left hypochondrium may be so considered, but this was endeavoured to be accounted for in various ways, as symptomatic of the primary disease.

Corvisart has, however, observed, that the liver and spleen, being gorged with blood from an *acute aneurism* of the heart, those organs may become enlarged, attended with pain, and in time still more so by their pressure on the descending cava; and that this enlargement and pain felt at the region of those organs may mislead the practitioner in supposing the disease hepatic. But unless that we were much deceived in our estimate, and considering further what is noted in the dissection, also the colour of the body, which Corvisart himself, with some others, have observed to be red and bloated in such cases of dilated heart, this author's conclusion cannot be here drawn.

May not then a somewhat enlarged heart be considered here as the original formation of that organ, which, both from its unusual strength and capacity, contributed to give an extra-impulse and a force to the whole system, even to the extreme ca-

pillary vessels? Hence the facility of digestion and exhalation, and probably by intemperance, plethora, inflammation, and the hepatic affection; and the liver with the spleen having become in consequence enlarged, and these pressing upon the pancreas, destroyed at last this organ, and, also pressing upon the descending aorta, which I regret we were not permitted to examine more minutely, forced the naturally powerful heart to still greater action; thus, being further excited, it becomes larger.

Or, may the *Hypertrophia cordis* and the hepatitis be considered as originally distinct diseases, but both tending separately to increase and to aggravate each other, or, acting combinedly, to produce the ultimate effects, as these appeared in the case?

The torpidity of the bowels, and the peculiarity of the fecal discharge, which were so marked, may be accounted for from the state, not only of the liver, but also from the almost complete destruction of the pancreas; although it should not be forgotten, that a torpidity of the bowels is noted by several writers on such a disease of the heart as a common symptom. But the cutaneous exhalation being great, may occasion a slow alvine discharge; and the slow alvine evacuation may account for the peculiarity of the matter perspired in this case; and this peculiar state of the pancreas, may it not have been *ab origine* so formed?

In regard to the secretions in general, it may be observed, that all the writers I have seen, seem to have noticed only some of these; and, in particular, in cases of dilated heart, no notice whatever is taken of that of the skin.

Give me leave to add, that it might be gratifying, and highly useful to many of the profession, to be favoured with any observations on this or any other case of a similar nature, seeing that the pathology of the heart is so important, but so obscure, that few of our great systematical and nosological masters have gone into the investigation. Although the labours of many eminent men furnish much valuable information on this subject, yet these are detached; and the observations of some of them are not without contradiction and unsatisfactory hypotheses. *

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* The case of J. C. described in Dr Duncan junior's Clinical Reports, p. 54, was found to depend upon an enormously distended heart. He lived almost a year after leaving the hospital, but except that he became generally dropsical, nothing is known of the subsequent progress of his symptoms.

XII.

Case of Uterine Hemorrhage supervening on Instrumental Labour. By WILLIAM CAMPBELL, M. D. Fellow of the Royal College of Surgeons of Edinburgh, and Lecturer on Midwifery, &c.

On Friday, June 24th, at 4, P. M., I received a note from Mr N., requesting my attendance on his lady, who had been then some time in labour of her first child, and was from the commencement attended by the only midwife at present employed by the better ranks in town. On my arrival I found the head fairly in the pelvis, but without making the smallest pressure upon the perinæum, even during pains. The membranes were still entire, containing a limited quantity of *liquor amnii*. There was not the least puffiness of the scalp, which shewed clearly that the head was not exposed to any pressure, although the infant seemed, as it afterwards in fact proved to be, far beyond the usual size, weighing, to all appearance, from 12 to 18 lbs. avoirdupois; but the serious event of the case prevented my placing it in the scales to ascertain the correct weight; it is sufficient, however, to mention, that it was considered by every one as remarkably large.

The capacity of the pelvis at the brim must have been considerable to admit the transit of so large an infant, and that of the outlet was equally so. There was no tumefaction of the soft linings of the pelvis, nor did the patient complain of the slightest feeling of pain or tenderness on examination, from which it was manifest that there was no injurious pressure on the soft parts within the pelvis. The patient had no headach; the pulse was about 100, but quite soft and equable; the surface was generally and plentifully covered with perspiration; the strength good; and uterine action regular; the pains recurring every five minutes, although they were by no means strong.

Under these circumstances there was no necessity for applying instruments, and I accordingly declined having recourse to them, although they had been recommended previous to my being sent for, and no doubt from the best motives. I was in great hopes, from the powers and cheerful spirits of the patient, that, by assiduity and encouragement, uterine action might become more effectual, and that the natural efforts would ultimately succeed in accomplishing the delivery.

Ever since I began to practise midwifery, I have always preferred watching my patient to every idea of suiting my own convenience, and I endeavour to impress this principle in the strongest manner on the minds of my pupils. There is nothing which appears to me so totally void of principle and delicacy, as the premature or unnecessary use of instruments in the practice of midwifery. No desire, therefore, for operating, however ungovernable; no desire for steeping our hands in the blood of our fellow-creatures, however sanguinary; nor the wish for detailing cases unparalleled for danger, however strong our inclinations may be for relating the marvellous, should ever induce us to have recourse to instruments, without absolute necessity. By acting otherwise, we may please the ignorant, and we may acquire temporary reputation by exposing the lives of our fellow-creatures to imminent danger, or by actually sacrificing these lives; but this ill-acquired fame cannot fail to be followed by permanent and merited disgrace.

In the present case, I was still farther encouraged, by the short duration of labour, to delay the use of instruments a little longer; for although I had been informed, on my first arrival, that the lady had been in labour nearly a day and a half, I found, upon more minute inquiry, that uterine action could scarcely be said to have been properly established before half past four A. M. of the same day; because, when the midwife examined at eight A. M., the uterine aperture was only dilated to the extent of a half-crown piece, which, according to the laws of dilatation in primary labours, might be said to require a space of three hours and a half. I say primary labours, because it is only in them that those calculations can be at all relied on, and even in primary cases a practitioner would be occasionally much deceived if he trusted to such rules.

As there was not a single symptom present to create the smallest uneasiness, I took leave of the patient with every confidence, under a promise of seeing her again at six P. M., and I requested, that, during my absence, the apartment might be kept properly ventilated. I also advised every effort to be made to inspire her with confidence, with a view, by the stimulus of hope alone, to render uterine action more powerful; the good effects of which I have had many opportunities of witnessing.

On my return at six, I was informed that the pains were somewhat stronger; that the head had advanced a little; and that the patient was still perfectly free from every symptom of uneasiness; but, from motives of delicacy, she declined seeing me until eight P. M., when she requested that I should again repeat my visit. I was also given to understand, that the mem-

branes were still entire, therefore I requested the midwife to rupture them, with a view to promote uterine action. When I returned at eight o'clock, I found the patient in every respect as at my last visit, except that the head was so far advanced as to render the perinæum tense during a pain. I still thought myself justified to afford the natural powers an opportunity of completing the process, more especially as there was no unpleasant symptom present. At this time the patient's strength was still good; the uterine action, however, was by no means powerful, but she supported this anxious protraction of her sufferings almost without a murmur. I again took my leave, but with a determination to return at ten, when I promised to remain by her until she should be relieved.

On my return, I proposed examination, which was acceded to. I then found that the pains were very little increased in power, although they were regular, but that the head had advanced so far as to make the perinæum a little tense during a pain. Under these circumstances, I sat down by the patient, and intreated her to bear all with fortitude and patience, for I could easily perceive that she began to labour under a slight degree of despondency. From this time, until two the following morning, I remained constantly by her, using every argument likely to support her spirits; but still the uterus remained inactive, for I could scarcely say that there was any advance of the head. The head had now been fairly in the pelvis for ten hours, that is, from the time I first examined, however long before that; and I began to be apprehensive lest the infant might be lost from long continued pressure; or that the powers of the uterus might be so much exhausted as to render it incapable of contracting after the birth of the infant; and that I should thus be risking the lives of both by trusting any longer to the natural efforts. I thought sufficient time had been already afforded for the natural powers to complete the process, and, as there was yet very little increase of the uterine action, I was of opinion that no one could accuse me of acting too precipitately if I were to use the forceps. In proposing this alternative, it is evident that my principal objects were to save the infant, and the further exhaustion of the uterus; because there was not a single symptom present which could prompt the most timid to have recourse to instruments. I accordingly proposed the application of the forceps, and, after having explained my reasons for this proceeding, my advice was readily complied with. From the time the instrument was warmed and lubricated, until it was properly applied and locked, not above three minutes elapsed. I now began to extract, and repeated my efforts, during every pain, for

an hour, *i. e.* until three o'clock, when I succeeded in extracting the head. I at first used moderate extracting force, but increased it gradually; and, during the last forty minutes, which this part of the process required, I exerted all the power I was capable of, for I found that I made little or no progress by using moderate exertion.

After the head was extracted, I then caused the abdomen to be rubbed, with a view to promote the action of the uterus, and, if possible, have the rest of the process accomplished by the natural powers; but in this I failed, for, after waiting ten minutes, there was not the smallest advance of the body of the infant. No part of the funis was entwined round the neck of the infant as often happens, otherwise I should not have delayed so long, lest the circulation in the chord might be interrupted.

Seeing, therefore, that there was no advance of the infant, I insinuated my left fore-finger into its left axilla, or that resting upon the perinæum, and applied a soft cloth under the chin and round the neck, so that, while I extracted by the aid of the cloth, I was, at the same time, better enabled to accommodate the shoulders to the outlet, and extract the body of the infant in the proper direction, by having my left fore-finger in the armpit. I accomplished the extraction very easily in this manner, and, to my great satisfaction, the child was still living, but with considerable suffusion of face, and a slight degree of torpor, which last, however, was by no means remarkable, considering that the head had been longer than eleven hours in the passages, and that it was exposed to great pressure while embraced by the forceps.

After the infant was separated from the parent, I proceeded to ascertain the state of the uterus and placentary mass, having previously administered half a wine-glassful of brandy as a cordial to the patient. On laying my hand upon the abdomen, I could very distinctly feel the uterus, like an immense flattened pouch, and I could equally also feel the placenta contained in it. Frictions to the abdomen were now had recourse to, as also a moderate degree of extracting force applied to the chord, but neither had any influence in exciting the action of the uterus. On pressing upon the uterus moderately firm, I heard a sort of gurgling noise in the passages, and, immediately afterwards, observed a stream of blood flowing over the side of the bed. These appearances left no room to doubt the existence of hemorrhage, which was further confirmed by the aspect of the patient and state of the pulse. I instantly prepared to introduce my hand into the uterus, which was pouring out blood in profuse quantities, and, on reaching the placenta, discovered that

the greater part of it was detached, giving rise to the discharge of blood. I pressed upon the sides of the uterus, in different directions, with the back of the hand, in order to rouse it into action, but without any effect; so very great was the state of torpor under which it laboured. It now occurred to me, that if I were to remove the mass entirely, the irritation caused by detaching it from the uterus might occasion the contraction of this viscus; or, at all events, that after its removal I should then be enabled to press more immediately with the back of the hand upon that part from whence the flooding was most profuse, and, in this manner, moderate the flow of blood, and, by continual pressure, promote the contraction of the part.

I immediately, therefore, removed the mass, in doing which I encountered very little difficulty, because it did not adhere from morbid structure, but merely from want of uterine action to detach it. This step had no effect, for some time, in recalling the action of the uterus, nor yet the continual pressure of the clenched hand in different directions, so that the flow of blood continued for a while almost unabated, and the patient was sinking fast; the pulse became more and more indistinct, and at last left the wrist entirely for about twenty minutes; there was universal coldness; and the patient lay quite insensible, at first gazing wildly around her, but ultimately seemed as if asleep, with the eyes half open and contorted, and breathing under great restraint.

When we compare the present moment, where the mother *is* on the eve of sinking from hemorrhage, to that of the prospects of the family but a little time before, where every one was overjoyed at the unexpected event of the birth of a living infant, while the parent herself was perfectly free from any feeling which could give rise to the least alarm; all will admit that my situation was by no means an enviable one. The mother giving birth to a living infant was an unexpected event to the attendants, for they could not be made to believe that the child could be alive after the powerful efforts which I was compelled to exert, in order to complete the delivery; and, I confess, my own hopes were not very sanguine on this point. What rendered my situation still more unpleasant in this case was, that, had the patient sunk, of which there was every appearance, her husband must have received the news perfectly unprepared; for, it is clear, that I could not draw my hand from the uterus to go and inform him, and I felt averse that he should be made acquainted with it through the medium of a third person. I, therefore, determined that he should learn the actual state of matters from myself at the patient's bed-side, in doing which I also felt much

reluctance, but there was no alternative. When he came he inquired if I wished for more assistance; upon which I expressed a desire to have some one sent for, who might justify the practice I had adopted, as well as that which might be afterwards found necessary in the event of the patient reviving.

This step I conceived indispensable, in order to prevent any blame to which it was probable the sudden and serious aspect of the case might give rise. An experienced practitioner was accordingly sent for; but, by the time of his arrival, the uterus had contracted a little, so as to give a very considerable check to the discharge; the pulse had returned to the wrist, and was becoming progressively more distinct; and the patient made unsuccessful attempts to reply to questions asked her. She, however, laboured under a considerable degree of mental aberration until mid-day, and it was not until the evening that her voice was at all audible at any distance from the bed-side. The gentleman alluded to grasped the uterus through the abdominal parietes, while I continued to make counter-pressure internally with my clenched hand, and, at a few minutes past four o'clock, I was enabled to withdraw my hand from the uterine cavity where it had been for a full hour. On withdrawing my hand from the uterus, I brought away a considerable quantity of coagula, and I am certain that my calculations are considerably within bounds when I say that the patient lost 64 ounces of blood, by far the greater part of which came away during the first twenty minutes.

From the moment I perceived that there was hemorrhage, I *forced* the patient to swallow a wine-glassful of undiluted whisky every five minutes, until I felt the pulse return and the uterus contract; so that, including the brandy given immediately after the extraction of the child, I have no hesitation in saying that she took in all 13 oz., making allowances for the proportion that must have been lost in forcing her to take it. While I endeavoured to renew the contractions of the uterus in this manner, by pouring into the stomach so direct a stimulus as ardent spirits, I also had recourse to another practice, which I intended to act more immediately upon the uterus. This was throwing two parts of spirits and one of water into the rectum by means of a common glyster-bag and pipe, which was repeated four different times during the flooding; but I do not think it was attended with any benefit, for I did not feel the uterus contract in the least by it. So completely, indeed, was the whole system paralyzed by the great loss of blood, that the *sphincter ani* had no power in retaining the injection; and it would have returned every time, immediately on withdrawing the pipe, had it not been prevented

by pressing upon the anus. During this trying scene, the abdomen was firmly pressed upon, and also rubbed immediately over the uterus through the medium of a towel occasionally immersed in spirits. After the discharge had been checked, and the hand withdrawn from the uterus, the abdomen was then firmly bound up by means of the common binder; a couple of towels having been previously folded in form of compress, and placed over the uterus, in order to secure the contractions of this viscus. Strict injunctions were then delivered to the attendants to keep the patient perfectly quiet, and five grains of camphor, in form of julep, were administered every second hour, with a view to support the powers of the system, and promote the contractions of the uterus. The camphor was given for the whole of this day and the following, and the patient continued to recover rapidly. No symptom supervened, indicative of the bad effects of the application of the forceps, or of the exhibition of so large a proportion of ardent spirits, although such a thing might have been expected; nor was the great loss of blood found to be attended with any other unpleasant effect than debility, from which the patient gradually recovered. So effectual and rapid, indeed, was the recovery, that the lady was able to leave her bed to have it made on the fifth day after delivery. The milk appeared about the usual time, without being preceded by scarcely any symptomatic fever; which, after the first delivery, is usually severe, but which, in this case, must have been moderated by the loss of blood.

Hemorrhage to the extent here stated will, no doubt, be considered by some as of little consequence, and deservedly, if we are inclined to believe that women in the puerperal state have been known to support the loss of so large a quantity of blood as two wash-hand basons full evacuated in a state of coagulation from the uterus soon after parturition; or the still more enormous quantity of a chamber-pot full every day for a fortnight. I may, however, be allowed to remark, that such assertions border too much upon the marvellous to induce many to waste time in refuting them.

There is great room for comment in this case, especially on account of the mode of practice pursued having been different from that which is recommended by the most eminent practitioners of the present day, and the profession may, therefore, expect that I should offer some explanation of my conduct. It is not my intention, however, to enter into an elaborate discussion respecting the principles upon which I acted; that I shall leave to the gentleman who witnessed the case, and by whose opinion I was guided in the present instance. I shall

therefore conclude, by making a few brief remarks on the practice at present inculcated by the first authorities, taking it for granted, that the medical world at large are aware, that for years past it has been customary to exhibit solid opium in uterine hemorrhage, in such enormous doses as five grains every four or five hours, or adequate quantities of this medicine suspended in spirits. Opium is administered by the advocates for the practice, upon the principle of its supporting the *vis vitae*, and suppressing the secretions; and as it has been extolled by some high authorities, this has been thought sufficient recommendation for its use by the generality of the profession, many of whom, like true empirics, have never given themselves time to consider, whether it was exhibited upon proper theoretical principles or not, but have proceeded to administer it, on every occasion like the present, in doses equalled only by the natives of the east. While opium is administered with such prodigality, and under such plausible ideas, its advocates appear to have overlooked, that it has the effect of suppressing the contractions of the uterus, and that it is exhibited daily with that very intention, as in cases of lingering contractions; irregular action of the uterus, such as spurious pains, and hour-glass cases; and in the operation of turning, in order to suspend uterine action and enable us to extract the child, without risking a rupture of the uterus. It may therefore be asked, how, in the name of common sense, can opium be either safe or beneficial in any stage of uterine hemorrhage, where our principal object is to establish or promote uterine action, by which alone hemorrhage can be suppressed. But by cautiously throwing in so direct a stimulus as ardent spirits, we are enabled to support the *vis vitae*, and at the same time instantaneously excite the action of uterus, by the powerful stimulus which is thus imparted to the system; while we effectually avoid every risk of inducing torpor of the uterus, which is sure to follow an over-dose of opium.

The practice of administering ardent spirits in hemorrhage may appear a very harsh one; but I feel persuaded, that, had opium been given to this patient, she must have sunk in consequence; and, however unfavourable the method of treatment adopted in the present instance will be viewed by some, another case has occurred since, where the symptoms were equally alarming, and the same practice pursued with equal success. I shall very briefly detail the outlines of this last case. Mrs Bird, No. 3, Englis's Entry, Fountainbridge, a woman of low stature, and rather delicate, fell in labour of her fourth child on the evening of the 10th of July, and was attended by Mr

George Tod Moxey, surgeon, a very intelligent young gentleman, at that time one of my assistants for the summer course. The labour was extremely tedious, and the head remained so long in the pelvis, exposed to such a considerable degree of pressure, as to occasion much tumefaction of the scalp, which made me apprehensive lest the infant might be destroyed if the head were allowed to remain long in this situation. On this account, I deemed the use of the forceps necessary, and the head was extracted in fifteen minutes after the application of the instrument. The uterus laboured under great torpor, and felt no disposition to contract, which induced me to have recourse to frictions of the abdomen. This excited trifling uterine action, and partial separation of the placentary mass, which last gave rise to hemorrhage. So profuse, indeed, was the hemorrhage in this case, for some minutes, as to flow over the bed-side in very copious streams, similar to what happens in those cases where there is a large quantity of liquor amnii. The pulse left the wrist for several minutes, and it continued feeble for many hours after, but the patient did well during her confinement, with the exception of a slight threatening of suppression of the lochia, on the third day, which yielded to the usual means. So complete was the recovery in this case also, that I met the patient in the street on the 12th day after her delivery, although she must have lost at least 56 ounces of blood.

XIII.

Case of Fungoid Disease. By William Norris, M. D. Stourbridge.

February 6, 1817.—Mr ——, aged 59, apparently in good health, applied to me in consequence of the inconvenience he felt from a tumour, situated nearly mid-way between the umbilicus and pubes. He told me there had always been a mole exactly in the same spot, and that, nine months ago, the skin around this congenital mark assumed a brownish hue, and that from the part thus discoloured a tumour began to arise. On examination, I found the swelling was nearly of half the size of a hen's egg, of a deep brown colour, of a firm and fleshy feel, ulcerated on its surface, which discharged a highly fetid ichor-

ous fluid. The apex of the tumour was broader than its base. Some few months after the appearance of this tumour, distinct nodules sprung up around it, some with slender necks, others with broader bases. This singular production was at length removed by the knife, and the wound went on favourably, and healed. In less than six weeks the tumour again began to grow from the cicatrized surface, and felt hard and semi-cartilaginous, and very soon minute tubercles, of a livid colour, surrounded the tumour; some of them separated from, and others growing into, each other. Of the latter sort there were at least forty in number, forming a mass of disease extending nearly from the spine of one os ilium to the other, and bearing a resemblance to a large bunch of dark-coloured grapes, some of them flattened on the surface, and of various sizes. The prominent scirrhous-looking tumour occupied the centre; the tubercles already formed progressively increased, while fresh ones arose in their vicinity. The glands in the groin were swollen, and slightly tender to the touch.

This disorganization of parts was effected in two months, and continued to increase after that period. Yet the general health of the patient was not so much impaired as to prevent the regular use of exercise, nor did it interfere with the pursuits of business. Lancinating pains occasionally affected the diseased parts, and an early and continued symptom was an excruciating pain complained of near the right kidney. The urine at times resembled porter, and deposited a lateritious sediment. At length the constitution began to suffer more severely. Nausea and loss of appetite gradually came on, accompanied by restlessness and excessive depression of spirits. Bluish spots arose in the vicinity of a mole upon the sternum; others appeared in succession on the sides of the body, and on the back; and very soon the forehead and scalp were disfigured with the same morbid appearances. The whole body seemed to participate in this disease of structure, and to preclude all idea of relief from any surgical operation, and to leave no resource beyond palliative treatment. With reluctance, therefore, I felt compelled to leave him to his fate. Gradually increasing dyspnœa came on along with a cough daily augmenting in severity.

The animal frame became perceptibly impaired, and the patient very soon unable to leave his bed-room. All that art could do was, if possible, to alleviate his sufferings, which were excessive; but the relief that could be given was only partial. Mr Hodgson, of Birmingham, at my request, saw the patient, who was advised to take large and repeated doses of extract of hyoscyamus and poppy, which diminished the distressing cough

and dyspnœa. He loathed animal food, as well as fermented and spirituous liquors, which only added to his feverish heat and restlessness. He frequently complained of heat, though the temperature of the skin was not higher than natural; and though his feet felt to my hand perfectly chilled, and his pulse scarcely perceptible, still he was incessantly requesting to be fanned. In this miserable state the half-sitting and half-recumbent posture was the least irksome to him. Symptoms of general dropsy had for some weeks shewn themselves, and these were soon followed by an increase of restlessness, cough, and difficulty of breathing, until death closed his miserable existence.

Appearances after Death.

On making an incision through the original tumour, I found the texture to be heterogeneous; it was of a reddish and whitish brown tint throughout, not very unlike the internal structure of a nutmeg. The newly formed tumour, and the tubera around, though during life they wore a very different aspect, after death both exhibited the same dark-coloured appearance. On puncturing a considerable number of the different tubercles, a thick dark fluid was discharged from them.

Having described the external appearances of the disease, as they successively arose on the surface of the abdomen, chest, sides, back, and head, I will now describe the morbid phenomena within. On making an incision from the upper extremity of the sternum, and exposing the ribs, a small tubercle was found near the angle of one of them. By a division of this morbid growth, it was evident that the disease was not confined to the periosteum, but had extended to the very substance of the bone. On continuing the incision towards the umbilicus, numerous distinct spots were found dispersed through the cellular substance. On opening the abdomen I found numerous tubera of various sizes. To the eye of the morbid anatomist it was interesting to behold the tumours scattered in the utmost profusion in every direction. Upon the transverse arch of the colon, the omentum, mesentery, stomach, and the large and small intestines, on the first of which the spots were exceedingly numerous. In dissecting downwards to the vertebræ, I met with a mass of diseased structure, which proved to be the mesenteric glands, in a shockingly morbid condition, from which, when divided, a fluid escaped, in colour and consistence something like tar. The pancreas was diseased in a similar manner, as well as the liver, which latter was so changed in colour, (being of a dark brown,) and so altered in its structure, as scarcely to be recognised. Its surface especially was studded with large

oval masses of the disease, and its substance throughout was soft and pulpy. Slight tumours of the same nature were manifest in the organization of the kidneys. The spleen and bladder were the only organs exempt from the influence of disease in the abdominal cavity. On examining the chest, a still more extraordinary appearance was observed. The lungs were on both sides thickly mottled in large and smaller masses throughout the greater part of their texture. The same mottled appearance was still more vividly displayed on the heart, and the specks were minute, more numerous, and distinct; the heart was almost literally encrusted with them, both externally and internally, and the tubera were from the size of a pin's head to that of a pea. The arteries and veins were not involved in the disease. There was about a quart of fluid in the abdomen; nearly a pint in each bag of the pleura; and perhaps two ounces in the pericardium. On dividing the scalp, many of the same diseased appearances were observed both on the skull cap and on the fascia covering the temporal muscles. The dura mater was also studded with them, though much less numerously than the mucous and serous membranes. The ventricles of the brain were nearly filled with fluid. The brain itself was apparently healthy, and with the exception of one speck on the leg, the extremities were free from the disease. It is remarkable that this gentleman's father, about thirty years ago, died of a similar disease. A surgeon of this town attended him, and he informed me that a number of small tumours appeared between the shoulders, which were severely cauterized, soon after which death took place. This tumour, I have remarked, originated in a mole, and it will be worth mentioning, that not only my patient and his children had many moles on various parts of their bodies, but also his own father and brothers had many of them. The youngest son has one of these marks exactly in the same place where the disease in his father first manifested itself. These facts, together with a case that has come under my notice, rather similar, would incline me to believe that this disease is hereditary.

Among the many cases on record of this dreadful disease, I am aware of no one wherein its ravages have been so extensive; nor am I acquainted with any case affording so strong a probability of the hereditary nature of the disease. These circumstances appear to me to add greatly to the interest of this case, and to justify the desire I feel that it should be laid before the public.

PART II.

CRITICAL ANALYSIS.

I.

Medical Topography of Upper Canada. By JOHN DOUGLAS, Assistant Surgeon 8th Regiment. 8vo. London, 1819. pp. 126.

MEDICAL topography, or that science which teaches the effects of climate, locality, and other external circumstances upon health, has been too much neglected by British authors. We possess, it is true, a few detached notices, principally in the form of prefatory remarks to accounts of the diseases of foreign climes, while, so far as our own country is concerned, our information is miserably defective, insomuch, that a complete work upon the subject is one of the greatest desiderata in our professional literature. The records of the medical department of our army, as they are now constructed, bid fair to supply the deficiency, as far as the stations of the troops are concerned; but these bear so small a proportion to the extent of the country, and are necessarily so much confined to the military practitioners, that the profession at large can derive little or no advantage from them. In our review of Dr Millingen's work, in the preceding number, we transcribed from that author the principal heads of topographical inquiry recommended by him to the consideration of military practitioners, on their arrival in a foreign country. From these, and the hints thrown out in Dr Hennen's "Principles of Military Surgery," much important matter may be collected, with little expence of either time or labour; but it is to the resident, and not the casual inquirer, that we must look for a full developement of the effects

of the topography of any district upon the health of its inhabitants.

Some faint traces of inquiry into the influence of climate, situation, and modes of living, may be found among the early English medical writers. John Kaye, more generally known by the name of "Dr Caius," in his "Boke or Conseill against the Disease commonly called the Sweat, or Sweating Sicknesse," 12mo, London, 1552, attributes the immediate origin of the disease to the fogs which arose from the low grounds about Shrewsbury, acted on by particular winds, and aggravated by the filth of narrow streets. This author also refers to a work of his on the climate, productions, and mineral waters of England, but there is reason to suppose that this work was never published. Andrew Borde, or, as he quaintly entitles himself, "Andreas Perforatus," published "A Compendious Regiment or Dietary of Health, made in Mount Pyllor," (Montpellier,) 1562, in which he treats on the situations best adapted for the preservation of health, on the mode of building houses, on domestic economy, and on diet. All the physicians of that period, and for a long time after, looked upon astronomy, or, more properly speaking, astrology, as an indispensable part of their profession, and, as a branch of that science, they attended much to the course of the winds and the nature of the air, and they well knew their effects upon ulcerated surfaces. With the effects of different waters, and the superior healthfulness of certain situations over others, they were also acquainted, but nothing like a regular series of observations or conclusions applicable to their own country, existed among them.

The earliest work with which we are acquainted, which has treated on the *general* medical topography of England, is a small duodecimo volume by Claromontius, a native of Lorrain, published at London in 1672, and entitled "De Aere, Locis, et Aquis Terræ Angliæ, deque morbis Anglorum vernaculis." This little tract is dedicated to James Duke of Ormond, and in an address to the College of Physicians, which follows the dedication, the author apologizes to that learned body, that he, a foreigner, should encroach upon a province which appeared to belong exclusively to them, and he softens the severity of this tacit rebuke by the following observation: "Id vero vos, non tam negligitis quam relinquitis: propterea quod domi versantes, ea quæ externis rara videntur, vobis quotidiana sunt continuoque usu cognita." This is a general excuse which has proved, and is likely still to continue, the bane of science; but our topographer makes another apology for his work, more particu-

larly applicable to himself, viz. his wish to inquire into the actual state of the practice of venesection in England, to discover how far the frequent employment of that evacuation was called for by the nature of the endemic diseases, and to what extent these were influenced by the climate, water, situation, &c. In furtherance of this design, he enters into a general description of the country, and from his observations, he is led to the conclusion, that, although well timed venesection is a judicious practice, yet that, upon the whole, purging is oftener required, and better adapted to the cure of the diseases incident to the inhabitants of our island. This question of the comparative value of blood-letting and purging was, in former days, not always submitted to the arbitration of the members of the medical profession alone; it often became a subject of legal inquiry, and we have in the works of Zacchias a striking example. A young man was seized with a pleurisy: the physician first called in treated the disease lightly, but on the third day, the parents of the patient being alarmed, applied to another practitioner; he decided on bleeding. The original medical adviser, who was the senior of the two, ordered a purgative. Two new practitioners were now consulted, but the patient expired on the eighth day of his disease. The opinion of Zacchias is curious enough: "If," says he, "a patient dies from the ignorance or negligence of his physician, the latter is answerable to the law; the fault is the greater, if the physician persists in his error from contempt of a physician younger than himself. It is also a most dangerous error to form exclusive systems in physic, although physicians are certainly bound to follow the ordinary practices laid down by the masters of the art, if not prevented by very cogent reasons. "Now," says Zacchias, "experience shows that the omission of blood-letting in inflammatory complaints is often highly dangerous, while, if the inflammation exists in a high degree, the administration of a purgative is a *capital error*; therefore, the purging physician should be prosecuted." To the general doctrine of this celebrated jurist we have nothing to object, nor shall we venture to conjecture the changes which might be produced in his opinions by a perusal of some of our modern English works, or by a sight of the graphical illustrations with which an ingenious French artist has thought proper to adorn a recent exposition of the purging code. Whether the propriety of purging was ever made the subject of legal investigation in this country we cannot say; but that it occasioned violent disputes among the faculty in the eighteenth century, is sufficiently proved by the hostilities to which the question gave rise between the learned physician-general of the Earl of Peterborough's

army, Freind, and the fanciful professor of physic at Gresham College, Woodward. *

In the course of the seventeenth and eighteenth centuries, Sydenham, Wintringham, Bisset, Huxham, Sims, Millar, and others, published various works upon the state of the air, and of epidemic and endemic diseases; but the writings of all these authors fall very far short of what we should deem perfect specimens of the medical topography of the places in which they practised. That British physicians are not deficient in the talents necessary for such undertakings, is proved by the specimens which they have given, in their accounts of other countries. These are numerous: among them the names of Pringle, Lind, and Blane, are conspicuous for general descriptions; while, for special topography, Cleghorn's work on Minorca, and Irvine's on Sicily, are the most minute and the most important; the fixed residence of these gentlemen in the islands they have described, and in which they had the advantage of extensive practice as army surgeons, render their works particularly valuable.

To refer to *particular* instances connected with our own country: In the first volume of the Edinburgh Medical Essays and Observations, the leading articles have, with great judgment, been appropriated to a topographical account of the city; a meteorological register; a description of the instruments with which the observations in the register were made, and an account of the diseases which were most frequent during the preceding year, 1731-32. These essays are too well known to require any further notice from us. They have served as a model for numerous periodical works of later date, and the papers which they contain on the present subject of our inquiries, rank among the earliest and the best that this country has produced. In the Philosophical Transactions for 1778, Dr Haygarth published an excellent paper on the topography of Chester, illustrated with many striking medical facts on the state of disease in that city. A respectable contemporary journal (the London Medical Repository) presented us, in its first number for January 1814, a specimen of the medical topo-

* Among the curious pamphlets of the day, to which this controversy gave rise, we may name the title of one, which may mark the spirit of the combatants: "*A Letter from the Facetious Dr Andrew Tripe at Bath, to his loving brother the profound Greshamite, showing that the Cacoethes Scribendi is a distemper arising from the redundancy of Biliose Salts, and not to be eradicated, but by a diurnal course of Oils and Vomits. With an Appendix, concerning the application of Socrates his Clyster, and the use of clean linen in a Controversy.*" 8vo. London, 1719.

graphy of the Metropolis, and in the March number for the same year, a series of queries on a simple and comprehensive plan, for the guidance of those disposed to make medical topography a subject of their inquiries; but we are sorry to observe that few of its correspondents have availed themselves of these queries, or at least have made their investigations public. In a paper in this Journal for July 1817, Dr Chisholm has ably illustrated the statistical pathology of Bristol and Clifton; and Dr Hunter of Leeds has prefixed some topographical notices of that place, to his paper on the epidemic fever which some time since prevailed there. It is not our intention to particularize every detached notice that may be found in our numerous periodical works, although, from their paucity, the enumeration would not be difficult; indeed, we may venture to assert, that probably not a thousandth part of our own island has been particularly described, with a view to the influence that its situation, productions, climate, &c. have upon the health of its inhabitants, while, of its general description, we possess scarcely any thing.

That great and numerous obstacles exist to a general medical topography of this or any other country we are most ready to admit; but we have little hesitation in saying, that the greatest of all is to be found in the apathy of the resident medical men, from whose cordial co-operation alone any thing of the kind can be expected. "Any voluminous work, whether systematic or empirical," to use the language of a learned author (*Young*) *in* his Essay on a branch of this subject, "must unavoidably contain much useless and some erroneous matter." To after times it must be left to correct these errors and prune these redundancies; but we cannot help expressing our regret, that even the germ of a general medical topography of our island has not yet appeared among us, and that we are left with little more than the bills of mortality, from which we can extract any information of the state of the public health of a vast majority of our most populous cities and counties. From these "empirical" sources we have reason to suppose that the loss of human life varies in different proportions from 1 in 36, the average rate for Middlesex, down to 1 in 78, the calculation for Cardigan; but for many of the causes of this striking difference we are consigned to the obscurities and intricacies of conjecture.

Of the sister island the topographical notices which we possess are very defective. Dr Gerard Boate published, in 1652, a Natural History of Ireland, in 12mo, which was reprinted in Dublin in 4to, in the year 1755. In this work, which is principally descriptive of the physical geography of the country,

there are two chapters on the health and reigning diseases, more curious than useful. In the works of Dr Rutty, a great many important facts, principally upon the weather, mineral waters, and other subjects of natural history, will be found; in his "Essay towards a Natural History of the County of Dublin," he has given some interesting topographical and statistical accounts of the capital. A medical topography of Cork in particular, and of the country in general, is prefixed to Connell's "Observationes Medicinales," published in Dublin in 1746. This book, by a physician whom the learned Gaubius has styled "The Irish Sydenham," is less known than it deserves to be. We are not acquainted with any modern work in which we are informed of the important changes which must have been effected throughout that part of the empire since the days of Rutty and Connell, nor any which can be looked upon as strictly topographical, although, from the numerous excellent reports lately published on fever, we may derive much useful information on that subject.

The Royal Society of Medicine of France attached particular importance to the science of Medical Topography, and, accordingly, in the excellent preface to their Memoirs for the year 1776, we find a comprehensive plan on the subject, addressed to their members and correspondents, and to practitioners in general, with a view to collecting a general medical topography of the kingdom. In consequence of the attention paid to their proposals, the Memoirs of the Society abound with topographical notices, and accounts of the epidemic and endemic diseases of man, and the "epizooties" of the lower animals. The collections of papers from the military hospitals by Hautesierk and De Horne also abound in valuable materials, insomuch that, if they have not a complete national work, the French may, without hesitation, be allowed to possess the greatest number of contributions towards that purpose of any other European nation. Menuret's Essays on the History of the Medical Topography of the Capital leave little more to be done in that branch of the subject.

The physicians of Italy, Sweden, Denmark, Holland, Germany, and other continental states, have all contributed, more or less, to the formation of a national medical topography; and an author of the last named country has the merit of having produced perhaps the best Essay extant on a General Medico-practical Geography. *

* Fincke, Versuch einer allgemein mediscinisch-practishen Geographie, Leipsic, 1792, 3 vols. 8vo. In a note to a paper on the "Recent Progress of Me-

Africa and Asia have not, so far as we know, possessed native topographers; but some tracts are extant upon the subject by Spanish, French, German, and English authors, who have visited them as travellers, or been employed in the medical service of their country. The well-known work of Bontius, Physician-General in the service of the Dutch East India Company, contains an entertaining and instructive series of dialogues, supposed to have passed between himself and his friend, Dursens, upon the climate, food, &c. of many parts of these extensive regions; but by far the most important topographical paper that we have ever met with upon the diseases of India is a special report, Medical, Geographical, and Agricultural, by the medical officers of our own Company's service, under the presidency of Dr Ainslie, upon the epidemic fever which prevailed in the provinces of Coimbatore, Madura, Dindigul, and Tinnivelly, in the years 1809-10-11. This paper we would strongly recommend to the perusal and the imitation of all who are interested in topographical inquiry. It was published in London in the year 1816. On the occupation of Egypt by the French armies, conquest and literature went hand in hand, and the medical topography of the country was not neglected in their progress; an excellent circular letter was addressed by Desgenettes, the head of the medical-staff, to all the officers of his department; this, together with several of the answers, is published in his "Histoire Medicale de L'Armée d'Orient," and furnishes a valuable series of notices upon that interesting portion of the globe. Nor was the subject neglected by the British medical officers. Short as was their stay in the country, and embarrassed as it was by every species of privation incident to the unusual duties on which they were employed, they found time for researches illustrative of the climate, topography, and diseases, and to their zeal we owe the "Medical Sketches" of Sir James M'Grigor, and the "Observations of Dr Dewar on Diarrhœa and Dysentery."

Among the members of the profession in the United States of America much has been done on the subject, as is fully testified by the works of Dr Chalmers, Dr Rush, and Dr Currie. A very interesting communication, by a naval surgeon, upon the medical topography of New Orleans, appeared in our Number for April 1816. It was published anonymously, but is not unworthy the name of our correspondent Dr Archibald Robert-

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dicine," in our 18th Vol. p. 8, will be found several references to the most important of these works.

son, now of Northampton. The voyages and travels of Humboldt and Bonpland, which have enriched geography and natural history with so many splendid acquisitions, have added many curious, instructive, and authentic notices, to the medical topography of Mexico, a country which was formerly so little known, and of which the little that was known was so blended with fable. The "Essai Statistique sur la Nouvelle Espagne" of these authors, is a work worthy of that immense and important country, and of the names of the illustrious travellers who have described it. The "Notitias Americanas" of Don Antonio Ulloa also contain many valuable facts, particularly his 11th "Entretenimiento," in which he treats on the influence of climate and situation on the diseases of Peru.

Of the West India islands numerous topographical accounts are extant, both in works specially dedicated to the purpose, and in various periodical publications. Hillary's admirable work on Barbadoes, Hunter's on Jamaica, and the more general treatise of Dr Mosely, late Physician to Chelsea Hospital, are well known; but the most modern, and, we believe, the best accounts will be found in the papers of Dr Dickson, Physician to the Fleet, and of Dr Fergusson, Inspector of Army Hospitals. * From the pen of the latter gentleman we anticipate a work on medical topography, which, if it fulfils the hopes excited by the reading of his paper in the Royal Society of this city, noticed in our last April Number, will throw a light upon the intricate subject of Marsh Miasmata as brilliant as it is novel.

We are not aware that any account of medical practice, in that portion of the American Continent denominated Upper Canada, has ever appeared before the present, if we except a paper by Mr M'Causland, † published in the 8th Volume of the Medical Commentaries. We had previously some detached notices in the works of American physicians, by which it would appear, that, in Canada as well as in the United States, the alterations on the face of the country, consequent upon the clearing away of the woods and the improvements in cultivation, have much influenced the frequency of diseases of the febrile class, and that the winters are less severe, and of shorter duration, than at a former period. What may have been the information

* See Johnson on Tropical Climates, second edition. Various Papers by Dr Dickson, in the Med. Chir. Journal, and Dr Fergusson's Paper in the 8th Vol. of the Med. Chir. Transactions.

† Facts and Observations on different Medical Subjects, by R. M'Causland, Surgeon of the 8th (or King's) Regiment.

on these subjects possessed by the heads of our army during the late war in that country we cannot say, but we are bound to suppose that they had sufficient to enable them to guard against medical as well as military accidents. Canada was, to be sure, our own, and we might have had the same excuse for ignorance of its topography, that Claromontius made for the College of Physicians; but after the disastrous events consequent upon our want of information, on the diseases of a country much better known, and much nearer home, which the Walcheren expedition furnished, we cannot suppose that there was any lack of inquiry.

The conduct of our arch enemies the French, on the occasion of carrying a war into a new country, as far as regarded the health of their troops, is worthy of imitation. On the irruption of Bonaparte into Italy in 1796, a memoir was drawn up by the Inspector General of Health of the Army, and published by the Executive Directory, on the means of preserving and restoring health in that country. In this memoir were contained topographical views of the various parts of Italy, —their comparative salubrity,—their reigning diseases,—and the resources which each state, and each city and town possessed, for the support or restoration of health. To these were added special remarks on military hygiene, applicable to the circumstances of the army, the seasons and the climate, with practical notices, drawn from the best native medical authorities. So provident were the directors and their general for the health of their armies, that before they had advanced as far as Milan, the medical officers had pushed their topographical researches to the utmost extremity of the kingdom of Naples. Upon the same principle the Topographical Queries of Desgenettes, already alluded to, were circulated under a similar sanction; nor can we conceive any body of men to whom, if sufficient time is permitted to them, inquiries of this description can be more appropriately entrusted, than to the well-informed medical officers of an army; at a period of life when their mental and corporeal powers are in full vigour, and, aided by many concurrent circumstances, it becomes their interest to study minutely those subjects which either directly or collaterally may possess any influence upon health. They witness the endemic constitution of their occasional residences, and are often enabled to mark, not only the effects which local circumstances produce on new comers, but also the various shades of difference which are observable, until the constitution becomes assimilated to that of the native inhabitants. Endless opportunities for research, comparison, and analytical induction, are presented to their view,

and the value of these great sources of improvement is rarely diminished by that paralyzing influence which present or prospective independence but too frequently exerts over the talents and the industry of man.

The work of Mr Douglas appears to have been written partly during the period of the war in Canada, and partly since his return from that country. It is a short and spirited sketch, and, as far as it goes, is creditable to the author's talents. It is divided into six sections or principal heads. The first is on the topography of the country; in the others he treats in succession of the soil and climate,—of the services of the troops,—of the diseases which prevailed,—of the state of the wounded,—of the provincial militia and Indian nations who co-operated with the army. From the first section we shall extract an account of the town where the general hospital was situated.

"York, the seat of government, and capital of the province, is built on a level plain, along the northern bank of an extensive bay, which communicates on its west side with the lake. This bay is long and narrow, and fed by many streams from the contiguous soil, which in summer supply its waste of evaporation. It is navigable to vessels of considerable burden; and its shores in many parts are overgrown with rushes. Those winds which at times agitate the surface of the lake, seldom or never disturb its stagnant waters. The site which the town occupies appears to have been once a deep meadow, interspersed with pools of water. Some spots of ground which border upon the town are as yet in a state of nature. Even those fields which have been cultivated are not sufficiently intersected with drains to carry off the collections of water, which, in the rainy season of the year, often inundate the soil. The inhabitants of the town do not exceed six hundred, a number extremely small when contrasted with the whole population of the province. The town on its west side is defended by a fort, which is erected on a dry and level spot of ground. Here was established the general hospital, in rear of the army, to which the sick and wounded were conducted as necessity or contingency required. In sickly seasons the inhabitants of York are liable to be attacked by intermittent fever." pp. 15—17.

The general nature of the soil and climate of Upper Canada is sufficiently well known. Mr Douglas states, that the thermometer often indicates as great a reduction of heat as is met with in any other part of the globe; but it struck us as rather singular, that we did not find any specific statement as to the degrees of temperature indicated by the thermometer; so that, from this and the actual acknowledgment of one of his correspondents, we are led to suppose that there must have been a want of those useful instruments at the military hospitals of Canada.

Before we enter into the subject of the prevalent diseases, we shall give a specimen of the mode of warfare in the country, which no doubt greatly contributed to give them their peculiar character.

"The services of the army in Upper Canada were arduous and severe. So great was the scarcity of men, both at the commencement and during the continuance of the war, that no sooner had a regiment arrived at Quebec, than it was immediately ordered to proceed on its march to the Upper Province. The route was long and tedious; the fatigues great; and many difficulties were to be overcome. This line of march, from the point of debarkation to the Niagara frontier, where hostilities were carried on, includes a distance of nearly 550 miles. The road is cut through the woods, and runs along the banks of the river St Lawrence, and the northern side of Lake Ontario, varying in its course with the undulations of the shore. It is often interrupted by deep bays, and also by numerous tributary streams which discharge their water into the river St Lawrence. In many places where the ground is low and marshy, large trees are cut down, and laid crosswise, to facilitate the passage. When a march was undertaken in spring, or in autumn, the miry state of the roads presented many obstructions. Nor were the oppressive heats of summer, superadded to the fatigues of long and forced marches, less dispiriting to the soldier. When the passage was rendered tedious from the wetness of roads, the troops were generally conveyed to the Upper Province in *batteaux*, from which they were often obliged to disembark when they had to encounter the rapids of the river. The hauling and poleing of these vessels against the stream was attended with much labour. The clothes of the men employed on this duty were almost constantly wet. During night their accommodations were wretched. They slept cold and comfortless in the barns and out-houses of the settlers, which are widely scattered along the banks of the river. Sometimes, when overtaken by night, a fire was kindled in the woods, around which they stretched themselves till morning.

"But winter, with its attending storms, offered greater impediments to a march than any other season. Vehicles to forward the baggage could not always be procured. For successive days the march was at times obstructed by the falling of snow; and the drifted state of this in the woods rendered it hazardous to prosecute the journey. The faces of the men were often frost-bitten when much exposed to the north wind. Sometimes, indeed, the tear was no sooner secreted from the eye, than it congealed into an icicle upon the eye-lashes, so as to restrain their motion. Many of the wooden bridges which conducted across the streams had been burnt down by the enemy. The ice not being of sufficient thickness to support the men and baggage, delay was thus rendered unavoidable. But, more dejecting than all, such obstructions as these were sometimes accompanied with privation. When the rations of the men were expended,

the settlers could afford but little from their winter's stock of provisions. Thus want, in addition to the inclemency of winter, and the numerous impediments of a long march, increased the burden of general calamity. The night, too, proved more uncomfortable than the day. Though the men were stretched before the fire, the intenseness of the cold was severely felt. The toils of the day were not always followed by the refection of sleep. Its return seemed to be prevented by a certain degree of cold, and a deficiency of covering. The silence of the night was disturbed by the howlings of savage wolves, that prowled around the cottages. Nor was the ear less impressed by the rude winds in the forest, and the incessant noise of an impetuous river. The road, at times emerging from the woods, ran for a considerable distance along the edge of the river. Huge sheets of ice were then seen piled to an amazing height along the rocky margin of the stream. The accumulated mass, obtruding from the shore, appeared to alter the direction of the current. Rivulets descending from abrupt precipices, seemed from afar frozen to the eye. The grandeur of the scene was heightened by a variety of all those sublime objects which can engage the mind amid the general wildness of nature. Infants at their mothers' breasts supported with impunity the severity of winter.

"When the shores of the lakes were sufficiently frozen, so as to support the men and baggage, the day's march was completed with facility. Besides, it could be shortened or prolonged according to circumstances, when a choice of accommodation could frequently be obtained; yet the early completion of a route, attended with so many unavoidable obstructions, was always to be wished. Though other difficulties were to be surmounted in the field, their anticipation had as yet no power to sully the fondness of expectation." pp. 34—39.

That disease should appear among men thus exposed, is not a matter of surprise; hence we find pneumonia to have been particularly prevalent. In some it was sufficiently marked from the beginning; in others the symptoms were more obscure, and only fully developed themselves after venesection had relieved the oppressed vessels. On the appearance of the blood we have the following remarks:

"Neither the cupped appearance of the blood, nor its sizy coat, at all times corresponds to the severity of the symptoms of inflammation. The abstracted blood of one man who died of pneumonia exhibited little or no siziness on its surface. This, however, is a rare occurrence. There is truth in the assertion, that the marks of inflammation on the surface of the blood are, to a certain extent, modified by the shape and temperature of the vessel, and by the force and magnitude of the stream, as it springs or descends from the arm. In many instances the form of the coagulated mass bears a striking resemblance to the figure of the vessel which contains it. In

different cupfulls taken at the same bleeding, the relative quantity of serum to that of the crassamentum is often considerably varied. When the constitutional symptoms of pneumonia run high, the serum generally predominates. In this case the coagulated part has often been observed firm in its texture, elevated on its margins, and covered in its hollow centre with the buffy crust. The circular border of the crassamentum, when it joins the sizy coat on its external edge, assumes the colour of the arterial circulation, probably owing to its greater exposure at that part to the action of the atmosphere. The coagulated mass, which is of a dark colour on its under surface, either sinks or swims in the serum. This, however, depends on the manner in which the blood is taken from the arm. When the stream is strong, and propelled in a straight line to the cup, the generation of air-bubbles on the surface of the mass renders it partly supernatant.

"The tenacious fibrine, spread over the superior part of the crassamentum, feels tense and elastic to the touch, and not unlike the firm consistence of a muscular membrane. In this state it would appear, that the blood has acquired the property of forming a new bond of union between inflamed parts by an adventitious process of adhesion. The dissolved appearance of the blood which at times occurs in pneumonia, may seem to dissuade us against the employment of the lancet. This appearance, however, is at last overcome by repeated blood-letting. Coagulation takes place, and the crassamentum becomes coated with its inflammatory covering." pp. 56—58.

Rheumatism was, as might naturally be expected, frequent among the troops, and it often attacked the exposed parts of the body in its chronic form, without having been preceded by acute symptoms. Intermittents were also frequent, but Mr Douglas never met with them in the quartan form. The "lake fever," as it is called by the settlers, is neither more nor less than the summer and autumnal remitting fever, and doubtless took its rise from the same causes as the intermittents. Like the bilious remittent of the West Indies, it often terminated favourably on the third day. A few sporadic cases occurred which bore a striking resemblance to that disease, but differed from it in the absence of black vomit, and its less frequent fatality. Depletion by the lancet, and by calomel and jalap, and occasionally salivation, were the most effectual means of relief. Dysentery sometimes appeared, accompanied with fever of the intermittent and remittent type, but without any strong symptoms of inflammation. Cholera was occasionally met with, generally as the result of drinking bad water, or eating unripe fruits, and possibly from the sultriness of the days and chilliness of the nights in the summer season.

Under whatever latitude soldiers are exposed to hard labour in uncultivated or marshy countries, the same diseases are to be

expected. It is curious to find that a nearly similar catalogue is given on the authority of the Physician General of the Forces, who served with the English army in Ireland, so far back as the seventeenth century. Dr Boate, in speaking of what he calls the "leaguer sicknesses" in the English army, "which, since this bloody rebellion, went over into Ireland to fight that murderous nation,' after enumerating the looseness and malignant fever, violent coughs, dyspnœa, sciatica, and severe stranguries which afflicted the troops, remarks,

"That those diseases had their original, not from any defect of climate, but of the cold and other hardships which the soldiers suffered in their marches; for they many times going into the fields in cold and foul weather, and sometimes marching whole days long, yea several days together, in very dirty and wet ways, where their feet and legs were continually cold and wet; besides, that they were sometimes constrained to pass through the water up as high as the knees and waist, and after all that hardship endured in the day time, to lie in the night upon the wet ground in the open air; this caused the afore-named diseases, and several others amongst them, in so great number, it being to be wondered at that many more did not fall into them. And, without doubt, in any other country of the world, where all the same causes did concur, and where an army endured the like hardships, the same effects, if not worse, would follow; so that, in this effect, the land itself is not at all to be blamed."

In the Surgical Details, Mr Douglas remarks, that the constitutional fever attendant on severe injuries was evidently modified by the influence of climate; it partook of a remittent character, and its period of attack depended on the early or late appearance of local inflammation. Recovery was often interrupted by attacks of intermittent fever, one of the most dreadful scourges of the wounded. Fowler's solution of arsenic was found to be more effectual in the cure of this fever than any other medicine. Itching of the tarsi, tenderness of the mouth, and salivation, contraindicated its further use. Sometimes it affected the bowels severely, though conjoined with opium. The dose was four drops of the solution three times a-day, which was increased according to circumstances. Before employing this powerful and valuable remedy, the stomach was emptied by an emetic, and the bowels by a gentle aperient.

Mr Douglas gives his testimony to the superiority of immediate amputation, over the consecutive performance of that operation. Hospital gangrene made its appearance only in two instances among his patients; no case of tetanus came under his notice, nor did he ever hear of the occurrence of that disease among the wounded in Upper Canada.

In his section on the Diseases of the Indians, Mr Douglas observes:

"It was rumoured at one time, that the venereal disease had spread extensively among the Indians. No case of syphilis, however, either in its primary or secondary form, ever came under my notice. The disease made its appearance only in a few instances amongst the troops, and from this circumstance the report seemed to originate. It is asserted by some who have lived and travelled in the interior parts of the country, that many of the Indian nations have a knowledge of certain plants, whose efficacy they deem infallible in the cure of every form of syphilis. An interpreter of the Souk nation, with whom I have conversed, not only corroborates this statement, but affirms, that he has seldom known the disease prove fatal to any of the Indians." pp. 121, 122.

Mr Douglas concludes this very creditable essay, by stating that more than two years having elapsed since his arrival from Canada, and no communication relating to the diseases of the army in that country having been given to the public, to supply the defect, he was induced to take up his pen. For this we are obliged; but we confess that we should have been much gratified by some more extensive views of the statistics, prevalence, and mortality of diseases in that part of the world, extracted from those documents which must necessarily abound in the hands of the senior officers who were employed in the service, or the practitioners who had long resided in the country.

To remember, and to record, are confessedly the humblest operations of the human mind; and he who may not possess *talents* to reason, or possessing may not choose to exert them, may yet confer essential service on science, by furnishing the materials to those who enjoy both the power and the will to make use of them. We well know that there are many in our profession who record nothing,—except the amount of their fees; who stigmatize inquiry with the title of innovation, and crush, instead of fanning into life, the generous glow of genius, while it is yet struggling for existence. To these *traders* we have nothing to address; but to those who cultivate the science of medicine, we would strenuously recommend the study of medical topography, as among the most important means of promoting our knowledge of disease. So far as the pages of this Journal may avail, we shall be happy to give publicity to the fruits of their researches; and it will be gratifying to us to receive from our correspondents, histories of particular endemics in Scotland, with short notices of the districts where they occur, by which we may be enabled hereafter to display the contrast between the symptoms of the same diseases as they have appeared in different seasons, among the rich and the poor, the young and the old, the robust inhabitants of country parishes,

and the more luxurious and enervated residents of populous, rich, and manufacturing towns.

We shall take an early opportunity of compiling a comprehensive plan for such memoirs. In the mean time we shall content ourselves with pointing out a few authorities which we would recommend as examples for imitation to such of our readers as may be disposed to concur with our views. We have already mentioned some valuable papers, and have referred generally to some of the best authors. Of these we may particularize "The Account of the Climate of Pennsylvania, and its Influence upon the Human Body," by Dr Rush, in the first volume of his Medical Inquiries and Observations; and his "Account of the Natural History of Medicine among the Indians," and of the "Influence of the Political and Military Events of the Revolution," to be found in the same volume; his "Inquiry into the Influence of Physical Causes upon the Moral Faculty," in the second volume; his view of the "State of Medicine," in the fourth volume; and the accounts of the various diseases of Philadelphia dispersed throughout the collection of his works published in that city. We would also recommend the attentive perusal of Dr Currie's "Historical Account of the Climate and Diseases of the United States of America." Besides these, Wilson on Climate, Woolcomb on the Frequency and Fatality of Diseases, Mansford on Consumption, Domier on Malta, Gourlay and Adams on Madeira, and Clarke's Medical Notes, will furnish much useful information in themselves, and will suggest many subjects for inquiry and elucidation. The second edition of the work of Dr Johnson on "Tropical Climates" will also be found to contain a large and concentrated mass of topographical information connected with these countries, while his work on the "Influence of the Atmosphere" may be advantageously consulted on our own. Ramazzini's work on the Diseases of Artificers, to which is added a small tract by Hoffman on Climate and Situation, has long been naturalized in our language by James's translation, and is not only useful, but, we had almost said, indispensable, to those who make medical topography, in its fullest extent, their study.

We confess that we feel considerable difficulty in adding to this catalogue, not from any paucity of materials, but because so many of them are completely beyond the reach of the general reader; we may, however, mention, that, in the French language, in addition to the books we have already noticed, the works of Foderé will be found to contain many valuable hints. The Italian work of Sarcone, Director of the Swiss Military Hospital at Naples, on the diseases of that city, is one of considerable value in every point of view. In the German language

works on topography abound. We have already noticed that of Finke on Medical Geography, to which may be added the writings of John Peter Frank, Schnurrer's Geograph. Nosologie, and especially the "Jahrbuch der Staatsarzneikunde," or Annals of State Medicine, of Kopp.

Those who have access to large libraries we must refer to the list of books given in Parr's Medical Dictionary, article Topography, and to the Literatura Medica Digesta of Plouquet, title "Topographia Medica." We must observe, however, of this, as well as of Dr Parr's catalogue, (which is so close an imitation as to have copied even the typographical errors,) that a number of the works quoted are almost, if not altogether, unattainable in this country, many of them having been published as inaugural dissertations at foreign universities,—many being references to books which in their turn refer to others without entering into particulars,—while many, if attained, will in no degree repay the labour of procuring, or the drudgery of perusing them, as we have ourselves painfully experienced. For a less voluminous, but more judicious selection, we would in preference recommend the learned work of Dr Young "On Medical Literature and Practical Nosology." Under the various heads of Climate, Employments, Habits, Clothing, &c. the references are sufficiently numerous, while the original essay which that distinguished philosopher has given upon the "Medical Effects of Climates," will be found not less remarkable for the clearness of its style than for the correct statement of the facts, and the justice of the conclusions deduced from them.

II.—III.

Systems of Surgery.

II. *The First Lines of the Practice of Surgery: designed as an Introduction for Students, and a concise Book of Reference for Practitioners.* By SAMUEL COOPER, late Surgeon to the Forces, &c. &c. 4th Edition. Vol. I. London, 1819. 8vo. Pp. 663.

III. *A System of Pathological and Operative Surgery, founded on Anatomy: illustrated by Drawings of Diseased Structure, and Plans of Operation.* By ROBERT ALLAN, Fellow of the Royal College of Surgeons of London and Edinburgh &c. &c. Edinburgh, 1819. 8vo. Vol. I. Pp. 496.

THE examination of systems, whether of Medicine or Surgery, does not strictly accord with the plan which we have laid

down for the critical department of this Journal, while, at the same time, we do not preclude ourselves from bringing before the notice of our readers any works, under whatever denomination they may appear, which we conceive worthy of attention for their novelty or their excellence. The first of the publications which stands at the head of this article has no claim to the former distinction, for it has already gone through three unusually large editions; but the rapid sale of these, and the increasing demand for a fourth, is a sufficient proof that it is eminently entitled to the latter. The second publication is as yet in an unfinished state, the first volume only having made its appearance, but, as a system emanating from the Edinburgh school, it is new, and when completed, we have no doubt will be found deserving of considerable praise. Both works come from surgeons who have seen much practice in the service of their country; Mr Cooper as an army and Mr Allan as a naval surgeon. Each of these gentlemen has also enjoyed other valuable opportunities of improvement; the first in the London hospitals, and the other as assistant to the late Mr John Bell of this city,—a gentleman who, whatever faults criticism may have found with his publications, was undeniably an eminent surgeon, and one of the first in this part of the empire who endeavoured to connect his art, more completely than it had previously been, with the actual practice of anatomy.

So different are the plans pursued by our two authors, that their books would not admit of being compared together, even were Mr Allan's system completed. Except on one subject, therefore, which we shall hereafter touch upon, we shall draw no parallels between them.

The present edition of his First Lines Mr Samuel Cooper conceives to be essentially connected with the last edition of his excellent Dictionary, published in 1818. These works mutually illustrate each other, and points which are but slightly touched upon, or which may have been altogether omitted in one, are fully detailed in the other. These two works, then, may be considered as one; and they indisputably contain a greater mass of matter, more ample extracts from the works of the most eminent surgeons both ancient and modern, foreign and domestic, and more copious reference to every accessible source of information, than has ever appeared in the English, or indeed has ever before been brought together in any other language; they, therefore, well fulfil the promise of their titles in forming an introduction for students, a book of reference for practitioners, and a copious Bibliotheca Chirurgica. Nor are they to be considered solely as compilations, since many valuable original re-

marks and cases are to be found in them under the articles Diseases of the Joints, Gunshot Wounds, &c. &c. On Lithotomy, Fractures, and Dislocations, he is very full; but if there is any one article, rather than another, where Mr Cooper has been more copious and more judicious in his selection, it appears to us to have been the various Diseases of the Eye. Under this head he has embodied absolutely every thing worth knowing by the practitioner, and has formed an excellent introduction to those who wish further to pursue the history of ophthalmic surgery, particularly of the German school. Nor has he allowed his "Esprit de Corps" to operate to the detriment of his readers; for, notwithstanding the serious differences of opinion which exist between the army surgeons on one side, and a well known London oculist and his patrons on the other, we never have these politico-ophthalmic disputes obtruded upon us. Why the parties themselves do not refer the matter in dispute to a mutual selection of able men, has long been to us a matter of surprise. Surely to a Baillie, a Cooper, a Home, or many others that we could name in the first ranks of the profession, might be submitted a question of this nature, with the most perfect reliance on their capacity as well as on their impartiality. It is on the deliberate opinion of such men, and not upon the effusions of angry and interested disputants, that the thinking part of the public will form their ultimate decision.

Mr Allan's work is presented, as he himself expresses it, "to the senior part of the profession with diffidence and respect,—to the junior not without hopes of its being useful,—and to his pupils as a mark of gratitude for the kindness and partiality they have on all occasions shown to him as a public teacher." In his preface, our author acknowledges the utility of Mr Cooper's work as a manual, but he conceives that it is not sufficiently extensive for the purposes of a system,—to supply the defect, and to present a consecutive view of medical as well as operative surgery founded on anatomy, and so comprehensive as to embrace the whole pathology of the science, he professes to have undertaken his own. In the volume now before the public he gives a general introductory view of the doctrines of inflammation, and then proceeds to the subject of Ulcers, Wounds, and Bandages, with which last the volume concludes. He has added, in foot-notes, an account of the doctrines and practices of the French school, thus exhibiting a comparative view of the existing state of French and English surgery. While Mr Allan admits that, like other systematic writers, he has availed himself of the labours of his predecessors, he assures us that he has advanced nothing that his own experience does not sanction.

The chapter on Specific Inflammations includes four sections, in which Fungus Hæmatodes, Cancer, Scrofula, and Venereal diseases, are discussed. It is on this latter point that we propose to compare his opinions with those of Mr Cooper, leaving to time, and the active spirit of inquiry which at present exists, to develope which of the prevalent opinions upon the subject are right, and which erroneous,—assured that the authors on both sides are individually actuated by a spirit of liberality, and perfectly convinced, that, however the ultimate decision may turn out, the profession and the public must reap considerable advantages from the investigation.

The following extracts will show Mr Allan's opinions on this interesting subject:

"In the management of primary venereal sores, we proceed thus: When a patient presents himself with a chancre, if there is little inflammation, and if the sore is recent, we touch it freely with the argentum nitratum, and immediately apply a little dry lint; at the same time we put the patient upon a mercurial course, which we continue till it exerts visible effects upon the system; that is, till the pulse is increased in frequency, and the mouth becomes sore. When the eschar separates, if the caustic has been freely applied, the sore is generally in a state of a simple ulcer, requiring no farther local application than a bit of dry lint; but if it remains stationary, and does not heal under the operation of the mercury, we increase the action in the part by washing it occasionally with a solution of the sulphate of copper, in the proportion of five grains of the salt to an ounce of water; or we wet a bit of lint in the solution, and keep it constantly applied. During this local treatment, we keep the system under the full influence of mercury till the sore is healed, and for some time after, to guard against the possibility of any constitutional affection from absorption. If the chancre has been of long continuance before the patient has applied, if it is tolerably clean, and if there is no great inflammation, our first step should be to place him under mercury, to push the medicine till such time as the system is completely affected, and to apply to the chancre either dry lint, or, what is preferable, the ash-coloured oxide of mercury or the submuriate of mercury; a little of either may be sprinkled upon the sore morning and evening, which should be then covered with a little lint, and the old powder regularly washed off before a fresh quantity is applied; or a convenient dressing may be prepared, by suspending two drachms of the submuriate of mercury in six drachms of the mucilage of gum arabic. This is the liniment which I generally employ, and find to answer every purpose in this state of the sores. After the chancre becomes clean, it generally heals under the operation of mercury, with no other dressing than lint, applied in the manner now mentioned. If not, we apply the solution of the sulphate of copper, or a weak solution of the nitrate of silver, in the proportion of two grains to

an ounce of water. When chancres are foul, and there is no particularly marked inflammation, we may dress them with the red oxide of mercury, or touch them occasionally with a solution of the argentum nitratum, containing six grains in an ounce of water, or with a solution of the muriate of mercury, in the proportion of two grains of the salt to an ounce of water. When they become clean, we use the submuriate or dry lint, or the solution of the sulphate of copper, according to circumstances; but whatever local applications we employ, we must bear in mind that no patient is safe unless he is kept during the whole of the cure under the full influence of mercury." pp. 194—196.

"As bubo is an inflammatory disease, and as the inflammation is of a specific character, it is obvious, that in the treatment of it we should adopt those means which are best calculated to subdue inflammation in general, while we at the same time employ the remedy which experience pronounces best suited to the specific nature of the disease. In all stages of bubo, it is a primary object to employ mercury in sufficient quantity to destroy the venereal action, and to protect the system from the effects of the poison. For this purpose, mercury may be exhibited in a variety of ways, but here it is most advisable to administer it in such a manner that it may come in immediate contact with the inflamed gland. The best way to effect this, is to apply it to that surface from which those absorbents arise that lead to the affected gland; the mercury should therefore be rubbed in on the inside of the leg and thigh of the affected side. It should be used evening and morning, and applied in such quantities as to place the system speedily and completely under its influence. As the motion of friction is not only fatiguing to a patient in such circumstances, but tends much to irritate the gland, it is proper that the mercury should be rubbed in by another person. From the irritation produced in consequence of the friction, a painful inflammatory pustular eruption is apt to take place. To obviate this as much as possible, the hairs should be shaved off the inside of the leg and thigh previous to commencing the frictions. From half an ounce to an ounce of strong mercurial ointment should be briskly rubbed in for half an hour evening and morning, till the pulse becomes quick, with other symptoms of fever, and the mouth is slightly affected. If this practice is adopted in the incipient stage of the bubo, it will in general discuss it; although it will be prudent at the same time to put the patient on a low diet, to enjoin absolute rest, and the horizontal posture, and to keep cloths, wet with the saturnine solution, constantly applied to the groin. If the bubo is attended with much heat and pain, a few leeches should also be applied; and if the patient be vigorous, and in the meridian of life, with acceleration of pulse, it will be proper to abstract blood from the general system by venesection. If the bubo has made much progress, is very large, and the skin discoloured, it will be advisable to lay aside the cold applications, and to employ warm opiate or saturnine fomentations and warm saturnine poultices, with

a view to bring it to suppuration, although these means frequently materially assist in its discussion. We at the same time continue the mercury, if the system is not violently affected; for it has sometimes happened, that even after the formation of matter, buboes, under the operation of mercury, have been dispersed without bursting. When matter is once formed, we use warm fomentations three or four times a-day; and in the intervals warm poultices to soften the tumour, and to promote the ulceration of the integuments and escape of the matter. But if the bubo is inclined to become very large, and is long of bursting, it will be proper to discharge its contents by making an opening with a lancet at its inferior part. If this is not done, the integuments become so much distended that their tone is lost, they ulcerate largely, and the sore is long of healing." pp. 205—207.

"The Profession have, from time to time, been amused with new medicines for the cure of syphilis; but the united experience of all practical writers has declared that mercury is the only medicine which can with safety be relied on. But although this be the opinion of that part of the Profession who write from experience and not from speculation, still they are by no means agreed with regard to the manner in which the mercury should be used. If the modus operandi of mercury in the cure of venereal were once ascertained, it would be easy to regulate the use of the medicine so as to procure with certainty the wished-for effect; but while its peculiar mode of operation is unknown, the practice of the Profession must differ materially with regard to its exhibition. Accordingly, we find that a number of practitioners of late years administer mercury in such small doses, as barely to affect the mouth or exhibit any marked influence on the system; while others push the medicine so far as to excite a high febrile action, and visibly increase the secretions. It appears to me that mercury cures lues more quickly, and with greater certainty, when given in such quantities as visibly to quicken the pulse, raise a general inflammatory action, and gently increase the secretions; and that much less of the medicine is required to effect a a cure when thrown in quickly than when exhibited slowly; I shall therefore continue to adhere to, and to recommend, that practice which I have found to be the most successful.

"When mercury is given in such small quantities as hardly to affect the mouth, the cure is neither so quick nor so certain as when the circulation is much accelerated. A secondary venereal sore in general possesses little action; but whenever the mercury begins to quicken the pulse, the sore becomes more irritable and begins to heal. We stop the mercury when the mouth becomes sore; in a few days the action of the system abates, and the sore becomes stationary; we renew the use of mercury, the febrile action recommences, and the sore again begins to cicatrize; so that, literally speaking, a venereal sore heals by starts, and quicker or slower in proportion as it is rendered irritable. But in conducting a course of mercury, our great care should be not to push the medicine too far; for if carried beyond a certain point, the system becomes so excited, and

the ulcer is rendered so irritable, that instead of healing it inflames, becomes painful, and begins to spread, forming an ulcer of a new character, called the Mercurial Ulcer, which is nothing more nor less than an irritable ulcer produced by the action of mercury." pp. 218, 219.

On reviewing the three hypotheses respecting the action of mercury, viz. its evacuating, its specific, and its stimulating powers, Mr. A. considers that the general mass of facts is most reconcilable with its action as a stimulant.

When we state generally that Mr Cooper's opinions are strongly in favour of the non-mercurial practice, though by no means to the total exclusion of mercury, we need not occupy our pages with long extracts; but that such of our readers as have not seen the present edition of his First Lines, may be able to form an opinion both of its style and its doctrines, we shall transcribe the following passage from the first volume.

After making some remarks on the opinions of Hunter, Pearson, and other writers, Mr Cooper remarks,

"From the preceding facts and view of the subject, many curious and important considerations naturally arise. In the first place, they oblige us to renounce all the most important doctrines advanced by Mr Hunter, and adopted in almost every school, in relation to the history, progress, and cure of the venereal disease. They compel us to believe, either that true syphilis has totally changed, in the course of the last twenty or thirty years, or that most of the Hunterian theories about it were always false, and founded upon mistaken notions. At the present day it will be extremely difficult to come to a positive decision, with regard either to the altered nature or diminished frequency of syphilis; more especially, when we recollect two facts; first, that ever since the epoch of the supposed introduction of this disease from America, there have been practitioners at all times, who successfully treated every form of venereal complaints without mercury; and, secondly, the absolute impossibility of our asserting, that if experiments had been formerly made, similar to those which have now been undertaken, on a public-spirited, impartial, and extensive scale, the same results and inferences would not have followed. The facts, recently established, lead also to other highly important and interesting questions, in respect to the frequency and nature of the secondary symptoms, which occur when no mercury has been employed.

"Upon an average, according to Mr Rose, one out of every three of the sores, thus treated, was followed by some form or other of constitutional affection, which was in most instances mild, and sometimes so slight, that it would have escaped notice, if it had not been carefully sought for. The constitutional symptoms were evidently not such as could be regarded as venereal, if we give credit to the

commonly received ideas on the subject. Caries of the bones, and some of the least equivocal symptoms, did not occur. In no instance was there that uniform progress, with unrelenting fury, from one order of symptoms and parts affected to another, which is considered as an essential characteristic of true syphilis.

"Considerable diversity, however, prevails in the statements concerning the frequency of secondary symptoms in the instances in which no mercury was used. While Mr Rose, as we have seen, represents the proportion, observed by himself, to be as great as one out of every three cases, only six cases of secondary symptoms were remarked in the York Hospital, in nearly 100 patients, who had been treated without mercury. It is allowed, however, that the real proportion might have been somewhat larger; and, according to some other returns collected by Mr Guthrie, the proportion would appear to be about one-tenth. As far as the observations of another writer have extended, (Hennen,) eruptions are much more common in patients treated without mercury, than in others treated with it; but he states, that in none of the former instances have the breakings out ended in ulcerations, as has frequently happened in the latter. The observations, drawn from the returns of certain military hospitals, and published by Mr Guthrie, also tend to prove, that mercury lessens the frequency of secondary symptoms; for it appears, that out of 521 cases, treated with mercury in one district, only ten cases of secondary symptoms happened.

"In regard to the general mildness and curability, without mercury, of such secondary symptoms, as take place in cases where that mineral has not been employed, the reports of nearly all the gentlemen, who have entered into this investigation, completely agree. They concur also as to the fact of the rarity of the bones being affected." pp. 354—356.

Both these works are illustrated with several neatly engraved plates, those in Mr Allan's principally illustrative of strictures of the urethra, on which he treats in the chapter on venereal complaints.

IV.—V.

IV. *Practical Observations on the Symptoms, Discrimination, and Treatment, of some of the most common Diseases of the Lower Intestines and Anus. Particularly including those Affections produced by Stricture, Ulceration, and Tumour, within the Cavity of the Rectum; and Piles, Fistulæ, and Excrescences, formed at its External Opening. Illustrated by Cases. To*

which are added, some suggestions upon a New and Successful Mode of correcting Habitual Confinement in the Bowels, to ensure their Regular Action without the aid of Purgatives; on a principle essentially conducive to the Prevention of the above Diseases. By JOHN HOWSHIP, Member of the Royal College of Surgeons in London, &c. 8vo. Pp. 176. London, 1820.

V. *Observations on Strictures of the Rectum, and other Affections which Diminish the Capacity of that Intestine; including Spasmodic Constriction of the Anus, the Hæmorrhoidal Tumours, (called Piles,) Excrescences, and the Prolapsus Ani; and the Mode of Treatment; accompanied with Cases and Engravings.* By W. WHITE, Member of the Royal College of Surgeons, &c. &c. 8vo. Pp. 172. Bath, 1820.

THE diseases which form the subject of the Essays now before us, have but recently obtained that attention from regular practitioners in England which their importance merits. Like the Diseases of the Eye, some of them, for a long time, remained a sort of heir-loom to empirics; but the titles of these ingenious gentlemen are now undergoing such rigid examination, as to give every reason for hope that their claims to exclusive rights and privileges will be effectually disproven, and that those unfortunates, who have annually fallen sacrifices to their ignorance and their cupidity, will at length be rescued from their hands. Indeed, we cannot altogether exempt the regular practitioners from blame; for to their own apathy must, in some degree, be attributed the disgraceful progress of quackery in this country. It is true that the leading classes, orders, and genera of diseases, have met from British authors with an ample share of consideration, and we may boast, and justly too, that no other nation has excelled us in the practical part of our profession, so far as these have been concerned; but, as if the minor species of ills which flesh is heir to, were altogether beneath attention, they have been either very superficially touched upon, or left entirely unnoticed by our most esteemed systematic writers, who, apparently conceiving that the task of further developing the natural history of disease had been fully accomplished, have launched into the boundless ocean of theory and speculation, in rivalry, perhaps, of our great countryman who first

"Exhausted worlds, and then imagined new."

The authors before us are, however, of a much less poetical order, and have contented themselves with collecting facts rather than creating them.

Mr White is the first of our authors, in point of time, who has treated on the diseases of the rectum; the present work being his third edition. The date of his first we do not recollect, but a very interesting paper of his will be found in the London Medical and Surgical Journal for October 1809, Vol. XXII. Wiseman had mentioned the subject, but the earliest English writer (with whose opinions we are acquainted) who has given a full history of contracted rectum is Dr Sherwen, who, in the second volume of the Memoirs of the London Medical Society, published an admirable paper on the "Scirrho-Contracted Rectum." Dr Mossman also gave a paper on the subject in the Annals of Medicine for 1797. Many detached observations have since been communicated. Sir E. Home's labours are well known; and a special treatise on the diseases of the rectum and anus was published in 1810 by Mr Thomas Copeland. Among foreign authors observations will be found in the works of Tulpius, Ruysch, Morgagni, and Bonetus; and, more lately, in the Surgical Journal of Desault, and the late systems of surgery by other French writers. Mr White remarks,

"Practitioners who are not acquainted, from actual experience, with the disease under consideration, will be apt to attribute the symptoms of its early stage, either to habitual costiveness, piles, stomach complaints, or bilious obstructions; and to imputè those attendant on its more advanced progress to chronic diarrhœa. Hence it happens, that a prominent symptom is liable to be mistaken for other morbid affections of the alimentary canal; which proves the great necessity there is for a careful and minute investigation, where such a resemblance of symptoms occurs.

"What Dr Sherwen has so justly observed with regard to scirrhus of the rectum, is likewise strictly applicable to simple stricture.—'There is no disease,' he says, 'to which the human frame is incident, that is more liable to be misunderstood. Diarrhœa, dysentery, tenesmus, cholic, painful distension of the abdomen, inflammation of the bowels, and iliac passion, which are each of them formidable, and often fatal in themselves, may be successive symptoms of the scirrhous rectum. Under some one of these appearances it is highly presumable that many patients have died without the real cause having ever been assigned or suspected, and even when it is suspected and becomes an object of manual investigation, may be easily mistaken for an enlargement of the prostate gland or scirrhous uterus.'

"An opinion has been held that women are more subject to this disease than men. With this, however, my experience does not agree, as the greatest number of those by whom I have been consulted

were males; yet, I would not even from this infer, that men are more liable.

"Although no age or sex appears to be exempt from this complaint, yet it does not come so frequently within our knowledge, until persons have arrived at the meridian of life; the number afflicted at that period has certainly been much greater than at any other; at the same time it is proper to notice, that even in several of these cases, symptoms of the disease had been experienced at a very early age." pp. 6—8.

Many causes have been assigned for a strictured state of the rectum, such as spasm, inflammation, &c.; even syphilis has been supposed to produce it, an opinion, by the bye, as old as the days of Wiseman, who, we believe, was himself the first author that has mentioned it, but, in the present state of the question on this subject, we shall not enlarge upon this as a cause. According to Mr White, the most frequent predisposing cause is the gut being narrower about the termination of the sigmoid flexure of the colon than it ought to be for the purpose of allowing a free and easy passage to the feces.

"In those cases of obstinate costiveness, which are known so often to baffle the attempts of medical men, is it not rather surprising, that the existence of a mechanical impediment, should not strike the mind of the practitioner, when he has so frequent occasion to lament the inefficiency of the means he employs, and that his own efforts prove as unavailing as those of his medical brethren, to whom the patient had previously applied? Although it would be absurd to suppose that every case of habitual costiveness proceeded from a mechanical obstruction of the passage; yet, from various conversations I have had with different sensible persons (some medical) who laboured under strictures of the rectum, I am much inclined to think, that the most frequent predisposing cause is the gut being somewhat narrower about the termination of the sigmoid flexure of the colon than it ought to be for the purpose of allowing a free and easy passage to the feces. I was led to this opinion in consequence of patients having so often stated to me, that, so long as they could remember, they never had a natural motion, without experiencing more or less difficulty. It will then appear obvious, that, if the passage should be preternaturally small, it must necessarily form an impediment to the free discharge of the feces, and thus a foundation will be laid for a greater degree of contraction, as reiterated pressure from the accumulation of feces must tend to induce a spasmodic action of the intestine, and this, for a length of time repeated, may ultimately produce a more permanent state of contraction, increasing in proportion as the part becomes more deranged in its organization.

"In stating what I conceive to be the most frequent predisposing cause of strictures in the rectum, I do not mean to exclude other

circumstances which may contribute to produce the disease; for it is evident the intestinal canal must be liable to have its peristaltic motion deranged from various causes, such as acrid substances taken into the stomach, a morbid state of the secretions,—more especially the biliary; which, by inducing an increased vascularity of the mucous membrane of the intestine, may prove an exciting cause of stricture, agreeable to the observation of that eminent and distinguished physician, Dr Parry,—'In many cases of dyspepsia,' he says, 'the primary disorder exists in the colon, the villous coat of which appears to be affected with morbid sensibility, unspeakable uneasiness, burning heat, and all those other circumstances which have been described as occurring in the stomach. This state is very apt to run into inflammation, and is, I believe, a frequent origin of strictures in the intestine.' Though I perfectly agree with Dr Parry, that an inflamed state of the mucous membrane may sometimes prove an exciting cause of stricture, by inducing a spasmodic action of the muscular coat of the intestine; yet, I am convinced, from attentive observation, that a disordered state of the colon, very similar to what he describes, is frequently the effect of stricture near the termination of the colon, or in the rectum. The ceasing of these symptoms, when the mechanical obstruction is overcome, affords the strongest proof that the opinion is well founded—this fact having been witnessed in a variety of cases. As Dr Parry very justly remarks, the secondary affection is often mistaken for the primary, and this, I apprehend, to be another reason why strictures of the rectum are so frequently overlooked; for it often happens that the patient suffers more pain and uneasiness from a deranged state of the colon, as a consequence of stricture, than at the stricture itself; which is occasioned by the colon being repeatedly distended from accumulation of feculent matter, owing to the difficulty of the feces passing through a part naturally too narrow, or become so by the formation of a stricture. Hence the colon is weakened, rendered irritable and spasmodic; and, from repeated distention, it becomes greatly enlarged in its capacity." pp. 26—29.

We have had occasion, in three cases, to trace a temporary spasmodic affection of the rectum to the immoderate use of spice, combined with excess of wine. Far be it from us to throw out reflections against an admirable addition to our culinary comforts; but we must confess that cayenne pepper, or at least an article so called, was the spice used on all these occasions.* We have also seen another case in a gouty habit, in which we were satisfied that an affection of the liver, probably turgescence

* Our readers will recollect the composition of Ward's quack pill and paste for infallibly removing fistula in ano. The basis was pepper, and the action probably consisted in exciting an inflammatory disposition along the course of the rectum.

of its vessels, propagated to the mesenteric and hemorrhoidal branches, had given rise to a temporary diminution of the calibre of the lower part of the intestinal canal. An observation of White's lends a considerable degree of probability to this conjecture. At p. 30 he remarks,

"Before I conclude this part of the subject, there is a circumstance which I think deserving of notice, and that is, a tuberculated state of the liver, which was discovered on dissection in two cases; a fact, I believe, not hitherto noticed, as occurring in combination with a contracted state of the rectum. And, moreover, there appears to me some reason for supposing such a diseased state of the liver not an accidental occurrence; for, it is to be observed, that in other cases there has often been an evident derangement in the biliary secretion. And, it is also worthy of remark, that, in different instances, the introduction of the bougie has proved a stimulus to the biliary secretion, where that had been previously defective. As a confirmation of the preceding remarks, there is a case of diseased rectum, published in the second volume of the Memoirs of the London Medical Society, by Dr Lettsom, which was accompanied by a suppuration of the liver. After describing the morbid appearances of the gut, he says, 'The texture of the small lobe of the liver, and almost the whole of its substance, was destroyed by a large abscess, which was just ready to burst into the abdomen, and which contained a pure white pus.'" pp. 30, 31.

The leading symptoms which, according to Mr White, more particularly indicate a strictured state of the rectum, are habitual costiveness; sense of fulness in the transverse-arch of the colon, especially towards the sigmoid flexure; sense of pressure, and sometimes acute pain, confined to a particular point, with violent spasmodic contractions. Sometimes there exists a sensation as if the parts were tightly girded with a cord. All these sensations are in general aggravated in proportion as the stricture is seated high up in the rectum. At length uneasiness is felt on going to stool, attended with difficulty in voiding the feces, which gradually become more scanty, smaller, and more irregular in figure, and discharged with a convulsive jerk, and a sudden and loud explosion of wind; a sensation of tenesmus and uneasiness still continuing after the evacuation. There are also frequently present, pain of the back about the sacrum, hemorrhage, and pain of the head, especially in the occipital region. There is very little emaciation of the body or loss of strength until the disorder is far advanced, when the countenance becomes sallow, and the pulse quick, accompanied with other symptoms of hectic.

Mr White remarks,

"With regard to the lessened diameter of the feces just noticed,

which must necessarily be the case, whenever a permanently contracted state of the gut takes place; yet it has happened, in some instances, where that change had been observed, that, in a more advanced period of the disease, feces of a natural size had occasionally passed. The knowledge of this circumstance I consider of importance, inasmuch as, if properly attended to, it will prevent the practitioner from hastily concluding there is no stricture, merely from an examination of the evacuations; when symptoms may otherwise indicate the presence of the disease.

"If the stricture should happen to be so low in the rectum, as not to allow room for the accumulation of feces, it must appear evident that they will be found uniformly small in diameter, (in proportion to the degree of stricture,) while they continue to be discharged in a figured state. And also, when the stricture is high up in the rectum, so long as the gut below retains its natural expulsive power, an accumulation will be prevented, and the diminished size of the feces will continue. But, as the disorder increases, the inferior portion of the intestine gradually loses that power; and when the contraction becomes considerable, a small quantity of feces only pass at a time through the stricture, and not being sufficient to stimulate the lower part of the rectum, (which in a great measure is deprived of its natural action,) an accumulation goes on from time to time, until at length it becomes difficult to remove; and, on these occasions, feces of a natural size have been sometimes discharged." pp. 36, 37.

Actual examination by the finger or bougie, after the feces have been evacuated, is the only means of detecting this disorder, the patient at the same time making an effort as if to go to stool. With regard to the modes of cure, that by pressure, first recommended by Wiseman, is now sufficiently well known. He used tents of gentian and of deer's suet for the purpose, and these failing, had recourse to incision, and even to that *soothing* application the actual cautery. Dr Sherwen has proposed bougies of horn, previously softened in boiling water. Desault used tents of lint. Darwin proposed the introduction of bougies, or of a leather canula or gut, which was either to be distended with a wooden maundrill or with air; he also proposed the destruction of the stricture by lunar caustic. Sponge has been recommended by Mr Charles Bell, and courses of mercury have been proposed by Dr Robert White; but our author, upon the whole, prefers the common bougie; and, as adjuncts, he recommends the hip-bath, and injections with the extract of poppy. His method of making the bougies is as follows:

The manner of making the Bougies.

"℞ Ceræ flavæ ℔ i ½
Adep. suillæ prepar. ℔ iv. m ft. cerat.

"N.—In the winter, one part of wax will be sufficient to four of lard.

" A long piece of lint, folded and tied at one end, is to be dipped in this ointment, and drawn through a wooden mould; when cold, it must be passed through another mould of less diameter; then to be re-dipped and passed a third time.

" It is necessary to employ several moulds for the purpose of making different sized bougies." p. 172.

He remarks,

" The bougie should at first be of such a size as to pass the stricture without considerable resistance; for, if much force be applied, it cannot fail of exciting too great irritation, and of proving injurious by inducing inflammation and increasing pain. Although it is necessary to increase the size of the bougie, yet this should be done in a very gradual manner, (particularly at first,) until the passage becomes accustomed to the stimulus. As there is always more or less of spasmodic action excited on passing the bougie, it should be introduced in as slow and gentle a manner as possible; and it is generally necessary to desist a short time from pushing it forward, when it arrives at the stricture, until the spasmodic action ceases. Therefore, in passing the bougie, there is not only the resistance of a permanent stricture, but also the resistance of a temporary spasmodic one to overcome. At first, it should not remain longer than half an hour or an hour in the rectum; or, if there should be much irritation, not quite so long; this, however, seldom happens with the bougie which I employ, after it has completely passed the stricture. By degrees it may be suffered to remain eight or ten hours at a time, with little or no inconvenience to the patient. In general, it may be passed daily. The length of time it is necessary to employ the bougie must depend on circumstances. When the contraction is not considerable, and symptoms of the disorder have not been experienced for a very long period, a dilatation of the passage may be effected in the course of four or five weeks. But, in cases of long standing, and where the contraction is considerable, it may be seven or eight weeks before the passage will admit of the largest bougie. In some instances the stricture will not admit of dilatation to that extent. It is, however, surprising, what I have seen effected by patiently persevering in this plan, in cases which had been abandoned; in consequence of such a mode of treatment being considered as impracticable and injurious to the patient.

" It is proper to observe, that, though the passage be so far dilated as to admit the largest bougie, yet it is absolutely necessary to persevere in its use for some time afterwards, and then to leave it off gradually; because of the disposition of the passage to contract again, if the plan be relinquished too soon.

" It may likewise be proper to mention here, the effect the bougie has in exciting the natural action of the bowels. Sometimes it happens, that, notwithstanding the patient had been a long time before (perhaps years) under the necessity of constantly taking opening medicines, yet, after a few times employing the bougie, the bowels have

regained their natural action. This effect, however, is not always to be expected so speedily; for I have known instances, where the action had not been restored until three months after using the bougie; and in some cases not at all." pp. 57—59.

We do not mean to deny the utility of bougies in some cases; but we know them to have been frequently much less tolerable than the stricture itself. At this moment there is a patient under our own eye, who prefers submitting to the disease rather than to the introduction of that instrument, from the excruciating pain which it produces. With regard to the medical treatment, Mr White recommends the use of laxatives, especially castor oil, and mild enemas. The diet should be sparing, and restricted as to animal food; fruit or vegetables, and whatever food is introduced, should be well masticated.

Mr White's work is illustrated by two plates, and by a number of cases, some of them very interesting and instructive.

We anticipated much information on the first announcement of Mr Howship's work, knowing how zealously that gentleman had availed himself of the opportunities which his practice as an army surgeon, and his subsequent connection with Mr Heaviside, so amply allowed of; aware too of his abilities as an enlightened and a diligent prosecutor of pathological anatomy; nor were we disappointed. His work we can confidently recommend to the members of the profession as a valuable addition to their libraries, and as a depository of many interesting facts in the morbid anatomy of these parts. Its ample title-page is sufficiently indicative of the contents, and we shall give some extracts to enable our readers to judge of the mode in which Mr Howship treats his subject.

In speaking of the stricture of the rectum, he remarks,

"By examining the bowel in the earliest or inflammatory stage, we ascertain the existence of extreme irritability, or severe pain, in the seat of the affection, (Case 2;) the intestine feeling soft and pulpy, and the inner membrane thrown into folds.

"When the complaint has continued some time, and the sides of the gut are much thickened, in connection, perhaps, with effusion of coagulable lymph into the cavity, such thickening is more readily ascertained under examination. The lymph poured out into the canal may vary as to quantity and disposition; and, while recent, the adherent mass, whether divided into bands, or attached to one part only, may be peeled off and separated by the end of the finger; or, if perfectly organized, there are still other means by which its quantity may be lessened, or the inconveniences resulting from its presence removed.

"Occasionally there are only a few small membranous septa passing

across the canal, or a rough membranous surface, the extent of which may be determined by passing the finger on to the more perfectly smooth and elastic texture of the mucous membrane.

"When inflammation proceeds to ulcerate, the ulcerated surface will usually be very painful to the touch, and apt to bleed, unless indeed the cellular membrane has become sloughy. Should ulceration not have taken place, the thickening and consequent contraction in the coats of the canal will pass forward to the more advanced state of stricture, so as to prevent the introduction of the smallest bougie, and rendering the intestine at last impervious.

"Where stricture in this part has been ascribed to the venereal disease, the complaint takes place in the manner above-mentioned. The sides of the gut become thicker, and more firm than natural, lessening the diameter of the canal. It has been supposed that, in this particular affection, the mucous membrane of the bowel labours under an excitement similar to that which exists in the urethra in gonorrhœa; and to this circumstance the French writers have attributed the copious mucous discharges that occasionally attend the disease. I have, however, met with no fact in support of this opinion.

"Should the disease have arisen from translation, or retrocession of cutaneous eruption, or should it be conceived to originate in hæmorrhoidal or fistulous complaints, it will in either case observe the same course, and exhibit the same appearances that have been described already.

"The latter stages of strictured rectum, where it has no malignant tendency, are extremely distressing. The aperture of the stricture diminishing, the increased efforts required to expel the feces become not only violent, but at length unavailing; while the urgent straining tends only to aggravate the irritation of the diseased parts, exposing the patient to a degree of misery and torment almost beyond description. Happily, even in these circumstances, the disease admits not only of being relieved, but cured.

"When the difficulties of the disease increase, it occasionally happens that abscess takes place in the vicinity, which abscess extending to the cavity of the intestine above the stricture, and opening externally also, allows the escape of at least some part of the contents of the overloaded intestines; a circumstance I had lately the opportunity of witnessing in a poor person, who, under much distress from this complaint, could not be prevailed on to allow the proper means to be used for her relief, and consequently fell a sacrifice to the disease.

"Of the malignant, scirrhous, or cancerous stricture, the early course frequently passes by without notice: it sometimes proceeds very slowly. In one case, the first symptom was an occasional uneasiness, and frequent darting pain in passing a motion. In two other cases, one of which is published, the first symptom was an irritation at the neck of the bladder, (Case 6.) The more early symptoms are succeeded by those local inconveniences consequent to obstruction to the passage through the bowel.

" The distinction between scirrhous stricture and contraction of any other kind is always important, but not always easy; much assistance, however, may in general be derived from a careful attention to the history.

" It has been observed, that the firmness or induration in the feel of the stricture, and the apparently considerable extent of the affection, conveying the idea of a large mass fixed in the pelvis, is a criterion of its nature. This was once my opinion; but I have lately traced the same character in diseases from which, by proper care, the patients have perfectly recovered.

" The symptoms I think most clear, are either a peculiar sharp pain darting through the seat of the disease, or a more constant sense of glowing warmth or heat in the part. These symptoms, as far as I have seen, attend only the malignant, or scirrhous stricture. The means of relief also, as far as they relate to mechanical pressure, while they relieve other kinds of stricture, cannot be endured in this; in which they only tend to aggravate the symptoms, and hasten the progress of the disease." pp. 9—13.

In the section on the Treatment we have the following interesting remarks:

" Regarding the consequences of inflammation in the urethra, and in the rectum, as producing stricture, one material difference appears to be, the more frequent effusion of coagulable lymph into the cavity of the canal in the latter than in the former case.

" Where adventitious adhesions have taken place in the rectum, their division ought to be effected, if within reach, but always with the least possible violence. If recent, the finger alone will be sufficient for separating them, without injury to the surface of the bowel. Where, however, force or violence is necessary, the division had better be made with a probe-pointed bistoury, or with scissars; the instrument being cautiously introduced upon the finger, without being suffered to pass beyond the reach of that best of all directors.

" The occasional necessity for the aid of instruments, in dividing these adhesions, will be apparent, when it is recollected, that although coagulable lymph is easily separated or torn when it occurs as a recent deposit, its condition changes, it becomes organized, and the strength it may ultimately acquire is scarcely to be believed. In my Practical Observations in Surgery, a case is related, in which the usual symptoms of hernia were produced by adhesions formed within the abdomen, strangling a part of the intestinal tube. It is difficult to conceive that any cord or band, the merely accidental result of effusion, should be capable of bringing about so serious a consequence. I was, however, lately requested to open the body of a young woman, in which examination I found the abdominal viscera in general much incommoded, and the omentum diseased, from inflammation, which had deposited various cords of coagulable lymph, connecting the bowels in various parts to each other, and to the pelvis. One of these cords, attached at one end to the anterior pa-

rieles of the abdomen, and by the other to the small intestines, and thence indirectly to the spine, was scarcely thicker than a crow-quill, yet so strong, that, raising it upon the fingers of both my hands, I found it strong enough to enable me to lift the body almost entirely from the table." pp. 16--18.

In his chapter on Ulceration of the Interior Surface of the Intestine, we find the following observations, which appear to us very important:

"The occurrence of large discharges, apparently of blood from the bowels, is generally unconnected with ulceration; and as this particular disorder of the intestinal canal has been but little adverted to, though always serious, and often fatal, I may be excused in making some few practical remarks regarding this kind of hemorrhage.

"In July 1811, I visited a gentleman, who, towards the decline of life, was attacked with this disorder. Owing to various circumstances, he had long experienced a declension both in health and spirits; when he was suddenly seized with a severe vomiting and purging, which, from the appearance of the stools, seemed at first to resemble cholera morbus. There were frequent spasmodic pains in the bowels, a small weak pulse, and extreme prostration of strength. The excessive debility, and the severity of the pains were such, that, when the spasms came on, the accumulated contents of the rectum passed at once away, without any power of restraint. On the third day the vomiting declined, but the stools, although less copious, were now evidently blood, little, if at all, changed by mixture with other fluids. Mr Heaviside, who was the surgeon in attendance, had little hope of his recovery; but, assisted by medicine, and a light nutritious diet, he was eventually, though very slowly, restored to health.

"The next case, of which I had the opportunity of seeing not only the progress, but also the termination, I have formerly adverted to; it was one that I could only view in the light of a scorbutic complaint. Upon several accounts this case excited my particular attention.

"In January 1817, I had again an opportunity of seeing the disease, being consulted by a man aged 40, who, for several months, had passed, almost daily, blood by the rectum; without my being able to trace any disease in the anus, or in the bowel above it. He some days voided a dessert spoonful, at others half a pint. It generally passed alone, but sometimes with feces. This case was marked by spongy, but not bleeding gums; but it agreed with the others in extreme constitutional debility, and excessive depression of spirits, and might be clearly traced to a preceding course of low, poor, salted diet. I directed him to eat fresh food and vegetables, and ordered him to take also the juice of four lemons every day, in lemonade, or otherwise. In a fortnight his complaints were better, but the plan was now changed for astringents. The sulphuric acid, tincture of kino, rectified spirit

of turpentine, and various aluminous mixtures, were tried in succession, but without success; they produced severe spasmodic pains, costiveness, and sickness at stomach, without in the least checking the hemorrhage. These medicines laid aside, he was again ordered the lemon-juice, with the addition of bark and aromatics, the bowels being kept in a state of regularity by castor oil. Under this treatment, his complaints gave way, and by two months' perseverance he found himself entirely recovered; his spirits and strength being essentially improved, and the appearance of blood in his stools quite removed." pp. 63—65.

In his chapter on Intus-susception will be found some instructive remarks. This state of disease, he observes, may always be suspected where the bowels have been for many days obstinately constipated in early youth. For its removal he recommends the warm-bath, and the copious introduction of the vapour of warm water by a proper apparatus. Some experiments were tried last year by a friend of ours, which gave reason to suppose, that inflation of the bowels with atmospheric air, by a bellows, might be effectually employed in this complaint, but Mr H.'s proposal appears to us, as well as to our friend, a still more feasible plan, where a proper apparatus can be procured.

Mr Howship mentions, as a singular preparation in the collection of Mr C. Bell, a portion of intestine partly inverted, which had been passed by stool, and after which the patient perfectly recovered. This is, however, by no means a singular or uncommon occurrence. In Dr Monro's museum, in this university, several preparations of the kind have been long preserved, and not a few similar cases are on record.

In his eighth and last chapter, Mr Howship treats on the means best calculated to establish a regular state of the bowels. On this subject he remarks as follows:

"A circumstance that occurred in the year 1808, while doing duty as surgeon to the 82d regiment, led me to believe, that in many cases of confinement of bowels, medicines may be so directed as to render purgatives unnecessary.

"It happened that an elderly lady, residing at Scarborough, desired my opinion, requesting me to consider of some plan, by the adoption of which she might obtain a more regular action of her bowels. She had no complaint to make as to her general health; her appetite was good, and she slept well, neither did there appear to be any material defect in the condition of the digestive organs; the only objectionable circumstance being that of her scarcely ever passing a stool without the assistance of medicine. The advice, she said, she had always received from her professional friends was, that, when

confined in her bowels, she must still have recourse to opening medicines; she added, that really she had taken so great a variety and so large a quantity, that she loathed the very idea of going on, and felt extremely anxious to know if any plan could be suggested to render it unnecessary.

"On reflection, it appeared probable that this was an instance of deficient action from defective strength, and that, perhaps, by persevering for a time in the use of medicines calculated to restore tone, the bowels might recover the disposition, as well as the power, to propel their contents with regularity; at any rate, there could be no harm in making the experiment. I therefore first ordered the decoction and tincture of bark to be taken daily. This, in a week, appeared to have done neither good nor harm; there was no heat of tongue or skin: but there had been occasion for castor oil. Decoction of bark was next directed by itself; and in three weeks she thought her inside felt stronger, with less disposition to flatulence than before. In consequence of this amendment, the medicine was continued for a month longer, within which period, she found there was no longer any occasion to solicit the action of the bowels at all, a regular and easy motion occurring every day. This restoration in the tone and action of the bowels appeared likely to be lasting; for there had been no return of the complaint a year and a half afterwards.

"The adoption of a similar principle, with some slight modifications, has, in a variety of instances, enabled me to restore to the bowels the power of acting from their own impulse, without the perpetual necessity for being reminded of their duty. To set down particular instances would, I apprehend, be loss of time; neither have I preserved accurate notes but of very few. One of the cases in which this treatment completely succeeded has been mentioned. (Case 25.) I might enumerate many others, the results of which were equally satisfactory. For the present, however, it will be sufficient to observe, that I have, in some instances, at first combined the decoction of bark with a fourth part the quantity of infusion of senna, or with that proportion which answered the purpose of regulating the bowels, occasionally diminishing the quantity of the aperient, till the action of the bowels was observed to go on well with the bark alone.

"Under some circumstances, the decoction and tincture of bark will answer extremely well together; but the decoction alone is, in general, less apt to require the temporary combination of Epsom salt, infusion of senna, or some other aperient.

"If the innumerable train of ill consequences, known to be induced by habitual confinement of bowels, are adverted to, there will be no need to excuse the bringing forward any proposition that has for its object the prevention or removal of so great an evil; more particularly while we continue to retain that sort of instinctive feeling which leads us to prefer food to physic.

"I am not unconscious that we are all subject to feel the bias of attachment to our own opinions, for which reason the present re-

marks are intended rather as suggestions, than as established truths, the practical value of which can only be absolutely determined by their being submitted to the test of more extensive experience. The ability of an individual is confined to the power of stating faithfully what he may have watched attentively, within the comparatively narrow circle of his own observation." pp. 162—165.

Thirty interesting cases illustrate Mr Howship's little work, which is rendered still more useful by a good index. We have now only to express our hopes, that this industrious and able surgeon may long be spared to continue his valuable contributions to our profession.

VI.

Practical Essays on Strictures of the Urethra and Diseases of the Testicles, including Observations on Fistula in Perinæo and Hydrocele. Illustrated by numerous Cases and an Engraving; and prefaced with some Remarks on Life and Organization. By Robert Bingham, Fellow of the Royal College of Surgeons. Pp. 357. 8vo. London, 1820.

Mr Bingham seems perfectly aware of the limited and exclusive views with which almost every treatise on strictures of the urethra has been written.

We have Sir Everard Home writing at great length for the purpose of enforcing the use of the lunar caustic, and holding almost every other remedy in perfect contempt; we have Mr Whately again condemning the lunar caustic, and holding up the kali purum as exclusively worthy of our adoption; we have lately had Mr Arnot urging the utility of a particular species of tube for distending contracted portions of the urethra, and to these we may now add Mr Bingham on the use of the unguentum hydrargyri fortius, to the commendation of which a considerable portion of his book is devoted. We do not by any means object to this; and when we consider the different circumstances giving rise to strictures, and the different constitutions in which they orginate, we are pleased with every attempt to extend our knowledge of the disease and to multiply our sources of relief.

Mr Bingham introduces his work by some prefatory observa-

tions on life and organization, which do not appear to us peculiarly well placed in a practical work on strictures of the urethra. He strenuously opposes the idea that life is the result of organization, and says, that the following statement (which we quote for the benefit of our sceptical readers) has seldom or never failed to convert those infidels whom our author has occasionally met with:

"For life to be the result of organization, it must happen that organization is the cause, and life is the effect of the operation of that cause; but if it can be shewn, that life exists before organization, then it will appear probable that life is the cause and organization the result, for no effect can precede the cause which produces it. The organization of a hybrid animal resembles that of each parent equally: a mule, for instance, in its organization, resembles the horse quite as much as it does the ass, which proves that the parents had an equal share in producing the organization of the mule; and, consequently, no part of its organization could have been perfected before the parents copulated.

"Considering the short time necessary for the male parent to accomplish his part, we cannot believe that any of the organization of the future young is completed during that short period. Such an idea must appear so highly improbable that it would only be a waste of time to dwell upon it. Organization cannot possibly be completed in that short time, and yet of necessity something must be perfected, otherwise no young animal could be produced. The organization of every young animal partakes of the nature of both its parents: it cannot, therefore, be formed before each parent has contributed its share of influence to regulate the organization: it cannot be perfected, during the union of the two sexes, but it is perfected afterwards: it follows then, as a necessary conclusion, that the sexual intercourse perfects nothing but the principle of organization, or, in other words, the first germ of the life of the young animal—thus life exists before organization." pp. 7—9.

Mr Bingham next introduces some observations on the constitutional treatment of local diseases, and throughout the whole of his work evinces a most laudable attention to this important subject, prescribing, in almost every case, remedies calculated to obviate morbid affections of the stomach and bowels; for which purpose he seems to hold the blue pill, combined with small doses of castor oil, and other purgatives, in high estimation.

The first four sections of the work are occupied by a description of the various kinds of stricture; the theory, causes, and symptoms of this disease; and, in treating of these topics, we have not remarked any thing peculiarly novel or interesting in our author's views. In the next section we have some very just

remarks on the different kinds of bougies, the different articles of which they are composed, and the merits which each of them respectively possess.

In his chapter on the mode of introducing bougies into the urethra, Mr Bingham, when speaking of the introduction of inflexible instruments (of course including the common catheter), expresses himself thus:

"Until the point of the curved instrument reaches below the arch of the pubes, it may be introduced either with its concavity or its convexity towards the patient's abdomen; the former is the most simple, and therefore the preferable mode, except it be rendered impracticable by the protuberance of the patient's abdomen.

"The manner of passing the instrument with its convexity towards the patient's body is objectionable, because, when its point has got past the arch of the pubes, it must be turned half round to reverse the position of the other end, and in effecting this turn, if the point be not made the centre of motion, there will be great danger of injuring the urethra. In taking this semicircular sweep, the instrument must be allowed to be loose upon the surgeon's hand, and he must delicately accommodate his hand to its movements as it inclines to approach to or recede from the body whilst he gently carries it round, and then the urethra surrounding it will determine the centre of motion to the point. But if the surgeon exerts the slightest degree of control beyond what has been mentioned, the point of the instrument will never constitute the centre of motion, and he will incur risk of doing mischief great in proportion to his unnecessary interference." pp. 73, 74.

Although these sentiments have long been our own, we are not confident that we could have expressed them more accurately, and we do not, at this moment, recollect any previous author who has expressed them so well. We feel the more interested on this point, because we know that an inference, unfavourable to our own dexterity, was lately drawn, simply in consequence of our introducing the catheter with its concave side towards the abdomen; our patient, indeed, readily admitted that we gave him less uneasiness than his former surgeon, who introduced the instrument in the opposite mode, but the *coup de maitre* made with the catheter when its point reached the arch of the pubes had caught the gentleman's fancy, and, being a man of the world, he was decidedly of opinion, that whatever mode of proceeding was calculated to impress the patient with the highest opinion of his surgeon's abilities was obviously the best; the same apology might, however, be pleaded for every species of quackery, and, until we have a better reason than this for altering our practice, we shall continue to introduce the catheter with its concave

side towards the abdomen, as we have now done for many years with success.

Mr Bingham next proceeds to treat, in succession, of the cure of strictures by the simple bougie, the argentum nitratum, the kali purum, potassæ subcarbonas, natron exsiccatum, and the unguentum hydrargyri fortius. The merits of the three former have been amply discussed by preceding writers, and the three latter, particularly the unguentum hydrargyri fortius, Mr Bingham has the merit of introducing to our notice. Of the last he says,

"I come now to speak of another useful auxiliary to the bougie, which, so far as I can learn, has never before been employed in the cure of stricture; a remedy from which I have derived very considerable assistance, and which, on that account, I am disposed to recommend strongly: I mean the unguentum hydrargyri fortius." p. 177.

"The manner of applying the unguentum hydrargyri fortius is, to smear it upon the bougie, and pass it through the stricture, where it may be allowed to remain for a longer or shorter period, according as it is wished to exert more or less influence." p. 179.

"If the stricture happens to be impervious to a bougie, the unguentum hydrargyri fortius may be conveyed to it in the end of a flexible gum canula, and pushed from thence by a bougie, as described when speaking of the unguentum argenti nitrati." p. 183.

As we have nothing to offer upon the subject of these remedies from our own experience, we must refer to the work itself, remarking, that so many remedies have now been pointed out for strictures of the urethra, and each represented by its advocate as so abundantly successful, that we feel half inclined to adopt (with the alteration of a single word) the language of the poet:

> For modes of *cure* let fools contest,
> Whate'er is best administered is best.

Mr Bingham concludes his work by some observations on Fistula in Perinæo, false passages in the Urethra, diseases of the Testicles, Suspensary Bandages, and Hydrocele; on all of which subjects some pertinent remarks are offered, but to these our limits do not permit us particularly to advert.

The numerous cases illustrative of this work appear to be detailed with much candour;—the cures, in general, are not too expeditious, nor in any way miraculous;—and the powers of remedies are plainly stated, without any exaggerated representation of their effects.

PART III.

MEDICAL INTELLIGENCE.

On Tuesday 1st August, the Senatus Academicus of the University of Edinburgh conferred the degree of Doctor in Medicine on the following Gentlemen, (121 in number,) after having gone through the appointed examinations, and publicly defended their inaugural dissertations:—

Of Scotland.

William Aiton, . De Politeia Medica.
J. Wilson Anderson, — Medicamentis quæ in Cerebrum agunt.
Robert Baikie, . — Rubeola.
George Barclay, . — Peste.
Alexander Baxter, . — Febre Remittente.
Wm. Forrester Bow, — Rubeola, ejusque Communicatione Artificiosa.
Andrew Bullions, — Typho.
William Burn, — Febre Mediterranea.
Donald Butter, . — Hydrophobia.
George D. Cameron, — Cynanche Laryngea.
Ninian R. Cheyne, — Emphysemate.
John Cochran, . — Hemiplegia.
James Crawford, . — Ictero.
Walter Graham, . — Hepatitide.
George Grant, . — Hepatitide.
William Guland, . — Sanguinis Detractione.
William Hamilton, — Dyspepsia.
James Kellie, . . — Morbo Epidemico qui nomine Cholera Spasmodica per Indiam Orientalem nuper grassatus est.
Patrick M'Donell, — Syncope Anginosa.
Samuel M'Gavin, . — Rheumatismo Acuto et Chronico.
James M'Gregor, . — Cataracta.
John Millar, . — Renibus.
William Munro, . — Febre Intermittente.
John Paul, . . — Cynanche Trachealı.
J. Stewart Ramsay, — Cœli Ratione Valetudinis Imperatrice.
A. John Robertson, — Diabete Mellito Simplici.
John Scott, . De Febre Biliosa Orientali
Andrew Simson, . — Hydrothorace.
J. Craig Somerville, — Syphilide et ejus Curatione sine Hydrargyro.
William Spier, . — Sedibus Dotum Nervosi Generis Intellectui Inservientium.
Alexander Turnbull, — Ascite Saccato.

From England.

Wm. S. Beecraft, . De Usu et Abusu Sanguinis Missione in Febribus.
Robert Buchanan, — Scarlatina.
John Butter, . . — Ophthalmia.
J. William Calvert, — Vaccinæ veræ Testimoniis.
Alexander Clarke, . — Pneumonia.
John Crawford, . — Quibusdam Febris Epidemicæ Varietatibus.
Robert Dymond, . — Morbis Artuum quibusdam.
Tho. Stamp Edger, — Regimine Febrientium.
Tho. Curry Elliot, — Primo Nascentis Spiritu.
Henry Goldwyer, . — Ischuria Vesicali.
Thomas Grimston, — Hydrope.
Thomas Hallifax, . — Asthmate Spasmodico.
William Harland, . — Ascite.
Edward Jessop, . — Hepatitide.
Robert M. Kerrison, — Neuralgia Faciei Spasmodica.
Richard Kennard, . — Delirio Ebriosorum proprio.
John Gogill Leath, . — Phthisi, Cœloque Phthisi Idoneo.
Edward L'Oste, . — Rheumatismo.

Alexander Moore, . De Dyspepsia et Melancholia Dyspeptica.
Trevor Morris, . — Variis Sententiis quod ad Contagii Vires in Morbis Pestilentibus.
John Nesbitt, . — Exercitatione.
Robert Paget, . . — Calculorum Urinæ Natura.
Henry Goffe Parken, — Neuralgia.
Frederick F. Quin, . — Arsenico.
Henry Reeder, . . — Affectibus, Cordis.
Tho. H. Ridgway, . — Pneumonia.
Chas. Julius Roberts, — Diæta et Regimine Phthisicorum.
Wm. Blake Satterley, — Balnei Frigidi Calidique usu in Febribus.
Thomas Slacke, . . — Morbis Pressu Sanandis.
Ashby Smith, . . — Lepra.
Charles Thomas, . — Hydrope Tria Præcipua Corporis Cava afficiente.
William Thomas, . — Apoplexia.
Corden Thomson, . — Temperie Corporis Humani.
Charles Vinall, . — Morbis Capite sanciato certis.

From Ireland.

James Allen, . . De Cynanche Tonsillari.
John Armstrong, . — Hæmatemesi.
Joseph Wm. Austen, — Purpura Hæmorrhagica.
Tho. Edward Beattie, — Aneurismate.
Michael Bennet, . — Rheumatismo.
David Brereton, . — Uteri Hæmorrhagiis.
Francis Burton, . — Agitatione Nervosa Vulneribus Scloppetariis quandoque inflicta.
Francis Corban, . — Cynanche Tonsillari.
James Crawford, . — Strictura in Urethra.
Patrick Cussen, . — Typho.
John Evans, . — Colica Biliosa Intertropica.
Robert Evans, . — Apoplexia.
Patrick Glissen, . — Phthisi Pulmonali.
Copeland Grattan, . — Ophthalmia.
Samuel Holmes, . — Dysenteria.
Robert Hickson, . — Fistula Lachrymali.
Joshua Harvey, . — Diabete Mellito.
James Kenny, . — Febre Puerperali.
Henry King, . . — Febre Gibraltaia.
Thomas Love, . — Hepatitide.
Thomas Luby, . — Hepatitide Acuta.
Peter M'Intyre, . — Causis Arteriarum post Mortem Vacuitatis.
Joseph Joy Magee, . De Phthisi Pulmonali.
Montague M. Mahony, De Syphilide.
Nicholas Middleton, . — Ascite Abdominali.
Alexander Moore, . — Pneumonia.
Francis Moran, . . — Respiratione.
Patrick Murphy, . . — Asthmate.
Dennis Murray, . — Tabe Mesenterica.
Steele Murray, . . . — Hydrocele Tunicæ Vaginalis.
Thomas Murray, . . — Respiratione.
William H. Neligan, . — Erysipelate.
James Pope, . . . — Angina Pectoris.
Wm. Thomas Rankin, . — Rheumatismo.
Robert Scott, . . . — Asphyxia.
Richard B. Teulon, . — Asthmate.
Amos Vereker, . . — Arthritide Regulari.
Richard Fetnam Walsh, — Apoplexia Sanguinea.
Hugh B. Whiteford, . — Hepatitide.
Wm. Maxwell Wilson, . — Dyspepsia.
George Wyse, . . . — Aeris Effectibus in Corpus Humanum.

From Geneva.

John Charles Coindet, . De Renum Pathematibus.

From St Petersburgh.

Hermin Fred. Kilian, . De Nervi Glossopharyngei Origine.

From Canada.

John Stephenson, . . De Velosynthesi.

From America.

Samuel Annan, . . De Apoplexia Sanguinea.
Thomas Young Simons, — Somno.

From West Indies.

Gordon Warner, . . De Ophthalmia.

From Jamaica.

Edward John Spence, De Hepatis Functionibus.
William Turner, . . — Scarlatina.

From Barbadoes.

James Austin, . . De Hepatitide.
Mw. James Chapman, . — Affectibus Animi.
Francis Cobham, . . — Dyspepsia.

From Antigua.

Samuel Sedgwick, . De Rheumatismo.

From Honduras.

Francis Young, . . De Podagra.

From East Indies.

George Alex. Kennedy, De Tetano.
George Waddell, . . — Enteritide.

School of Physic in Ireland, instituted by Act of Parliament for the "Instruction of Students of Medicine, Surgery, and Pharmacy."

THE University Professors deliver annually a short Public Course on their respective subjects.

Lectures on the following subjects are delivered from the 1st Monday in November until the end of the succeeding April, viz. on Anatomy, Physiology, and Surgery, and on Chemistry, in Trinity College. On the Institutes of Medicine, on the Practice of Medicine, and on Materia Medica, and Pharmacy, in Sir P. Dunn's Hospital. The lectures on Botany commence on the 1st Monday in May in Trinity College, and continue until the end of July. Terms for each of these courses are Four Guineas.

Clinical Lectures are given on the cases of the patients in the hospital, at least two days in each week of every session, by one of the professors. Terms of each course, Three Guineas.

Lectures on Pathology, by the Professor of Anatomy and Surgery, are given during the month of May. Terms for these lectures, One Guinea.

Anatomical Demonstrations are given daily, from the beginning of the session until April, by the Demonstrator of Anatomy in Trinity College. The students are superintended in their Dissections, and subjects are provided for the Muscles, Blood-vessels, and Nerves. Terms for dissections, subjects, and demonstrations, Six Guineas; for the demonstrations alone, Four Guineas; for demonstrations and the use of the room, Five Guineas.

Students may be instructed in the performance of Surgical Operations on the Dead Body, and have the necessary number of subjects provided them, for Five Guineas.

Towards the end of the session, a course of lectures is given on the Diseases of the Skin, by the Professor of Anatomy and Surgery; and one on the Diseases of the Eye, by the Demonstrator of Anatomy. Terms for each of these courses, One Guinea.

A course of lectures on Midwifery, and the Diseases of Women and Children, is given in the spring. Terms, One Guinea.

It is intended to add a course on Toxicology and Medical Jurisprudence.

At the Chemical Laboratory, pupils are instructed in Operative Chemistry. Terms of which, Six Guineas.

Botanical Demonstrations are daily given by the professor's assistant in the garden during the season. Terms of which, One Guinea.

The course of lectures on Mineralogy, by the Professor of Natural History, in Trinity College, is open to those who have their names on the books of the University.

Students have admission, two days in the week, to the Collection of Minerals in Trinity College.

Pupils to the apothecary of Sir Patrick Dunn's Hospital are instructed in the Practice of Pharmacy, during three months, for Two Guineas.

Medical Officers of the Army and Navy, and Graduates in the

School, are admitted to attend the Lectures on Anatomy and Surgery, in Trinity College; but, if they purpose to obtain certificates, they are required to pay the usual fee at the commencement of the course.

As qualifications previous to examination for the Testimonium, the certificates of the professors in Edinburgh are admitted for any three of the courses required, with the exception of the Clinical Lectures, which must have been attended in the School of Physic in Ireland.

It will be expected that all students presenting themselves for examination, have dissected at least during one season, and that they are conversant with Morbid Anatomy.

Certificates of attendance on the professors in the School of Physic in Ireland are received, as giving standing in other Universities, and as qualifications for medical officers in the Army, Navy, and East India service. And certificates of attendance on the Anatomical and Surgical Lectures in Trinity College are also admitted in the different Colleges of Surgeons.

The Clinical Hospital is intended to hold one hundred and thirty patients, of whom thirty are selected for instruction and lectures, by the Clinical Professor; the rest are placed under the care of a physician appointed by the governors. Terms for attending the entire practice of the hospital for one year, Three Guineas.

The Medical Library of Sir Patrick Dunn is open to all the students of the school.

Royal College of Surgeons in London.

Court of Examiners.—Candidates to be examined for the diploma will be required to produce certificates——

1. Of having been engaged five years, at least, in the acquisition of professional knowledge.

2. Of having *regularly* attended two courses, at least, of anatomical lectures; and, also, one or more courses of chirurgical lectures, in London, Dublin, Edinburgh, or Glasgow.

3. Of having performed two, or more, *regular* courses of dissection.

4. Of having *regularly* attended, during the term of, at least, one year, the chirurgical practice of one of the following Hospitals: viz. St Bartholomew's, St Thomas's, the Westminster, Guy's, St George's, the London, or the Middlesex, in London;—or the Richmond, or Steevens's, in Dublin;—or the Royal Infirmary in Edinburgh;—or the Royal Infirmary in Glasgow.

5. And, of being twenty-two years of age.

Candidates are to observe, that *Tickets* of *Admission* only will *not* be received as *Certificates* or *Evidence* of *Attendance*.

Candidates under extraordinary circumstances of professional education, not literally corresponding with the foregoing rules, but deemed by the court, in effect, equivalent thereto, may be admitted to examination.

The above rules are required to be observed by Candidates to be examined for the Testimonial of Qualification of Principal Surgeon in any service.

Additional Regulations.—Persons under the following circumstances, and of the required age, are admissible to examination for the Diploma:—

1. Members of any of the legally constituted Colleges of Surgeons in the United Kingdom.

2. Graduates in medicine of any of the Universities of the United Kingdom, who shall have performed two or more regular courses of Dissection, and who shall have regularly attended during the term of, at least, one year, the chirurgical practice of one of the following hospitals, viz. St Bartholomew's, St Thomas's, the Westminster, Guy's, St George's, the London, or the Middlesex, in London;—or the Richmond, or Steevens's, in Dublin;—or the Royal Infirmary in Edinburgh;—or the Royal Infirmary in Glasgow.

Should doubt of the correctness of any required certificate of age, or *professional education*, at any time arise, such certificate will be retained in the College for investigation, during the pleasure of the court; and should a Candidate for examination be proved to have practised, or attempted, upon the court, imposition relating to any certificate, or otherwise, he will be refused examination for such period as the court, according to the circumstances of the case, may judge proper.—By order, EDMOND BELFOUR, *Secretary.*

AT a Meeting of Officers of the Medical Department of the Army, held at No. 5, Berkeley Street, 8th June 1820, Sir James M'Grigor in the chair, it was proposed by the President, and seconded by Dr Franklin, That a Benevolent Fund be established for the Benefit of the Orphans of Army Medical Officers.

The Army Medical Officers Benevolent Fund is instituted with the view of affording relief to those orphans of army medical officers who may be left under circumstances of particular distress; or who may be enabled, by a small addition of income at a certain period of their lives, to procure a better education than their limited means would otherwise allow; or who may require some assistance on their first establishment in life. Urgent cases of this description must have fallen under the notice of almost every one; and benevolent attempts have frequently been made to procure the requisite aid by means of private subscription. To provide a *permanent* and *separate* fund, expressly calculated to meet these cases of peculiar hardship, appeared to many gentlemen a most desirable object.

The leading feature of this fund is, that it is Benevolent. The objects of its bounty will be selected from among those who produce the strongest claims upon its support. Where there is any equality of claim, the preference will be shewn to the orphans of those whose parents contributed to the fund. Orphans who have lost both father and mother will, if otherwise destitute, be considered to have a superior claim. Those whose mothers are living may be admitted, however, to its benefits, provided the mother's income is inadequate to the education of the orphans. Upon the whole, the nature of the claims which may be made being very indefinite, it is not proposed

to limit the bounty by any specification of age or otherwise. The circumstances of each case will be judged of annually, first by a committee, and afterwards by a general meeting, who will ultimately select the cases proper for relief, and specify the amount to be afforded to each. This will be regulated by the circumstances of each case, and the extent of means, of which the fund may be possessed in each year. It is understood that relief by this fund is always to be afforded in the form of periodical *donations*, and never in that of *annuity*, even for a limited number of years.

A fund, such as may be sufficient for the fulfilment of these objects, it is proposed to raise by means of donations, life, and annual subscriptions. Hereafter it is hoped that the opulent in the department will remember this fund in their testamentary dispositions. Donations will be thankfully received from all officers of the army, and others, who may be desirous of promoting its benevolent objects.

A committee for the management of the fund was ordered to meet on the 1st of September.

Vapour-Baths in Edinburgh.

The application of water, sulphur, mercury, and other medicinal substances, to the human body in a state of vapour, still continues to be employed at the newly erected vapour-bath establishment in this city. We understand that these baths have been successfully used in some severe cases of catarrh, with symptomatic fever,—in gout, rheumatism, and stiff joints,—in syphilis and in lepra. They have also been used in some cases of paralysis, where apoplexy was threatened, and were found not to produce that determination of blood to the head which baths of hot water at a lower temperature had done; but, on the contrary, with immediate relief to the giddiness and painful feelings in the head, and with decided benefit to the weak limbs.

The vapour of opium has also been tried with decided good effect in a case of great irritability, and without any of the inconveniences which frequently follow when it has been received into the stomach. It is now trying in a case of neuralgia, (tic douloureux.) The first number of a work upon the subject by Mr Scott has been recently published by Messrs Waugh and Innes; the second is in course of publication, in which cases illustrative of the practice will be given.

Case of Enteritis succeeded by Cephalitis, successfully treated. By H. S. Belcombe, M. D.

Early in April last, my advice was requested for Mrs F. a young married lady, at Hanley in the Staffordshire Potteries, who, in consequence of slight cold, had felt unwell for some days back. Her brother-in-law, a medical gentleman at that place, had bled her copiously the evening preceding my visit, apprehending symptoms of enteritis. My patient was *belle et bien faite*, of spare and slender make, the mother of two children. Of her previous history I could only learn that she was what is generally called healthy, but subject to severe and frequent constipation of the bowels, which seemed to form the ground-work of her present complaint.

On my visit, I found Mr F.'s fears realized; enteritis was establish-

ed in its most acute form, nor had the previous bleeding produced any mitigation of her sufferings. A vein was immediately opened, and she was bled *ad deliquium*; the warm bath; calomel and nitre of each three grains every four hours, and a solution of manna in strong senna tea, (the only laxative that could remain upon her stomach,) were ordered. Next day the symptoms had remitted, but it was necessary to repeat the bleeding, and to apply many leeches to the abdomen. The bowels were now freely purged, the evacuations black and offensive, to a degree I have seldom witnessed. On the 3d day the mouth was sore; the abdomen free from pain; all the symptoms favourable, except a quickness of the pulse, which, I thought, was attributable to the action of the mercury: I therefore consigned my charge to my medical friend; but I was surprised, on the day but one succeeding, at being requested to see Mrs F. again, and still more so, to find very marked symptoms of inflammation of the brain. These had come on in the course of the previous afternoon, without any intelligible reason, (except that the bowels had become constipated.) I was certain, from the prudence of Mr F., that no stimulant, either in food or drink, had been given. The *intolerantia soni et lucis* was so great, that she could not bear the slightest motion about her, nor hardly permit me light enough to conduct my examination. She complained of intolerable weight and oppression of the head; vivid flashes of light constantly before the eyes; urgent thirst; the tongue was coated; the pulse full and labouring; the skin hot, &c.; no delirium; no pain upon pressure of any part of the abdomen; the mouth still sore. Copious depletion was again had recourse to; a blister to the nape of the neck; the head wrapped in towels kept constantly wet with vinegar and water; large doses of ext. coloc. comp., with calomel twice a-day, assisted by the former mixture of senna and manna, and a mixture of antim. tart. potass. nit. every four hours. The pressure of other engagements prevented my seeing her oftener than every other day, a circumstance I the less regretted, from the constant attendance of her brother-in-law. At every visit but my last, I was obliged to bleed ad del. or until sensible relief was obtained, besides applying numerous leeches every day. She was never delirious, always protruded her arm for the lancet, and expressed the relief she felt while the blood was flowing; it never had a true buffy coat, but the crassamentum was remarkably firm and fibrous. After the second bleeding, the pain was confined to the right hemisphere, on which side a blister was applied and kept open till it formed a running sore. At my fourth visit the pain in the head was sensibly abated, but symptoms of abdominal inflammation had supervened. This the bleeding of that day conquered. The bowels, notwithstanding the large doses of purgatives, were with difficulty kept soluble; the disorder sensibly yielding as the evacuations became more natural. The soreness of the mouth, which never amounted to ptyalism, subsided during the attack, and never again recurred. At my sixth visit, I took leave of my patient with sanguine hopes of her permanent recovery; yet within a week I was

again called to her, in consequence of a severe attack of pleuritis. I understood that the pain in the head had returned a few days after I saw her, and that her brother had found it necessary to continue, in a modified degree, my plan of treatment. As she slowly recovered, difficulty of breathing, pain in the side came on, and at length a very marked case of pleurisy was established. Almost in despair, I again began the evacuating system, and at length had the pleasure of subduing this last attack, but not without repeated bleeding, leeching, and blistering. My patient was by this time terribly worn down, and in my opinion inflammation had nothing to fasten upon. However, a few weeks in the country soon restored her to her usual appearance. I understand that she is since pregnant.

The whole of this case appears to me to be peculiarly interesting, and to afford ample scope for meditation. That the condition of the blood was highly inflammatory, I think there can be little doubt, and from this cause, (however induced,) as the attack on one organ was repelled, another became the object of it. Calomel certainly here failed to equalize the circulation; but then, to use the energetic language of Dr Armstrong, the system was not saturated; and, disappointed in the first instance, I trusted more to the lancet, and only used it subsequently as a purgative. I can only regret that I did not push it further; for I have attended many cases of acute inflammatory disease, when sensible remission was only obtained when full and complete ptyalism was established; and I think I am warranted, from no inconsiderable experience, both in hospital and private practice, in saying, that calomel is a most efficient medicine in fever and other inflammatory diseases. I was therefore sorry to read Mr Sheppard's opinion, as stated in his sensible and well written paper in your July number; however, as I hope shortly to condense my observations, and to shape them in the form of a paper for your Journal, I will for the present no longer encumber your pages.

Newcastle, Staffordshire, November 30, 1819.

Extract of a Letter from Dr S. Sinclair, Royal Tyrone Staff, dated Depot House, Caledon, 15th June 1819.

Having lately visited the French capital, I was pretty assiduous in my attendance at L'Hotel Dieu. The following remarks I noted from the public lecture and demonstration of Monsieur Dupuytren, first surgeon to that fine hospital, while paying his daily morning visit.

A case of dislocation of the hip-joint of the left side was brought to the hospital for reduction, on the 16th March. The accident had occurred, as Monsieur Dupuytren stated, on the 28th December previous, by a fall on the pavement during the frost. The patient was a low robust muscular man, aged about 30 years. There was an inability of moving the limb, which was shortened, and the toes turned inwards.

The patient having been placed horizontally on his right side, on a firm table covered with a mattrass, Monsieur Dupuytren demonstrat-

ed to his pupils, that the trochanter major was forced upwards and backwards, the head of the femur resting on the dorsum of the ilium, and under the glutei muscles, that the knee and toes (as before observed) were turned inwards.

The skin and soft parts being defended by slips of soft linen covered with wax and oil, which encircled the limb, a sheet was passed between the thighs; the ends crossing at the right groin, were placed in the hands of about six assistants, with a view of making counter-extension; another sheet was applied a little above the ancle joint of the dislocated limb, and given to an equal number of assistants, the skin being in like manner protected by soft dressings.

Dupuytren was now at considerable pains to exhort the patient to commit himself entirely to him, as if dead, and not to attempt the smallest resistance, which would counteract his utmost efforts at reduction. And while he directed the extension to be made horizontally by the assistant, he endeavoured to divert the patient's attention from what was going on, by conversing with him on subjects the most interesting to him at any other period, viz. the state of his fortune, if he was married, and the number of his children, &c. with a view of suspending the power of volition on the muscles. While extension was made to the utmost that it could in this way, (but not without subjecting the patient apparently to excruciating pain,) Dupuytren, by pressing with his hand against the head of the bone, seemed to force it in the axis of the brim of the acetabulum; when, directing the extension to be discontinued suddenly, the contraction of the muscles drew the head of the bone at once into its natural situation, and the dislocation was ascertained immediately to be reduced. The proper position and function of the limb being restored, he was placed in a cradle, and cautiously removed.

In the lecture which followed on the subject, after observing the difficulty which writers and practitioners in general have stated to exist against our success in this operation, he remarked that Mr Astley Cooper and Mr Lawrence had advanced in their writings, that the luxation of the hip-joint could not be reduced, if it continued out after the space of eight days.

This case, he said, proved the fallacy of such a statement, from the considerable time that had elapsed from the receipt of the injury, until the period of reduction; and it led him to conclude, that he never should again despair of reducing it, at least after eight days.

On my return to London I mentioned this case to Mr A. Cooper. He thought it interesting, but said that Monsieur Dupuytren had made a mistake with respect to himself; that he must have meant Mr Samuel Cooper, author of the Surgical Dictionary; and that he had himself succeeded in the reduction of dislocated hip-joint cases after a period either of four or five weeks.

About the same time Dupuytren also reduced two cases of luxated humerus, one of eighteen days standing, the other nine days from the accident; the head of the humerus in both was downwards and forwards, lodged beneath the pectoralis major muscle. Counter-ex-

tension was made by means of a bandage passed round the body, and over the opposite shoulder. The extension was made by a cloth applied a little above the wrist, the parts being previously guarded with dressings of wax and oil. The arm being brought to a right angle with the body, a large ball was placed in the axilla, which the surgeon pressed downwards, and sudden relaxation being made, the reduction took place.

Dupuytren remarked, that the British surgeons condemned the place and manner that the French surgeons made the extension; the former always applying it above the intermediate joint of the extremity. He said that it was wholly a matter of opinion,—that one opinion was as good as the other,—that the French found their manner effectual,—and one fact was of more value than one thousand hypotheses.

In cataract, Dupuytren now condemns the operation of extraction wholly. He gives a most decided preference to couching, "*debasement.*" In four cases that he operated on at the same time, the results were very different. Of the two operated on for depression, one was a boy of fifteen years. The cataract arose from external violence from the blow of a stick across the eyes. In both no untoward symptom happened; neither local inflammation or pain of the head followed; vision was restored, and they were discharged cured in two or three weeks. The two cases operated on by extraction were equally favourable cases, but the results quite different; and they continued in the hospital for months, he observed, as evidences of the bad effects of extraction. One of them lost an eye by the escape of the vitreous humour and collapse of the eye; the other eye had a protrusion of the iris, with a high degree of inflammation, pain of head and febrile symptoms, which the most active depleting means could not wholly subdue.

The second case of extraction proved equally obstinate from inflammation, and thickening of the cicatrix of the cornea. After repeated bleedings, general and topical, and blistering, &c. faint hopes remained of vision being restored. Dupuytren contrasts the simplicity of couching with these unfavourable results, which admits of repeated trials in case of one failure, to the dexterity required in the other, and still with the utmost manual nicety. He observes, in general, there is almost an unavoidable escape of the aqueous and vitreous humours, with protrusion of the iris; and frequently without these accidents, the thickness of the cicatrix on the transparent cornea prevents the admission of the rays of light to the retina.

Notwithstanding the objections of this eminent surgeon, it must be observed, that the French surgeons generally do not condemn this operation. At the hospital of La Charité, Monsieur Roux is in the habit of practising it with great success, usually, when it is necessary, operating on both eyes at the same time.

Extract of a Letter to Dr DUNCAN, *Junior, from* JOHN EVANS, *M. D. Physician to the Fahan Dispensary, and Member of the Royal College of Surgeons of London.*

THE following case will add another example to the list of fungus hæmatodes proving fatal after an operation for its removal.

The case is singular, inasmuch as we believe this untractable disease has rarely attacked children at so *early* a period. The preparation you will find in the possession of Dr Monro.

W. WHITE, aged 16 weeks, an interesting and otherwise healthy-looking child, was treated at the "Fahan" Dispensary, in consequence of a tumour occupying the middle of the left fore-arm. The tumour evidently was of the description meriting the appellation of Fung. hæmat., and of course little was done for it. On the 14th December 1819 the tumour had acquired an amazing size, and the health of the infant now began to suffer. He had restless nights; peevish; emaciated; and ulceration had commenced on the skin of the anterior part of the tumour. It was evident to the most superficial observer, that, if not relieved by an operation, the little patient must inevitably sink from the violence of the complaint; and the parents wishing it to be done, to give the infant a chance of recovery, it was accordingly performed on the date mentioned. The stump was perfectly healed on the 17th day, and the child slept sounder the night of the operation than it had done for many previous ones.

It continued to thrive and improve for about three months after the operation, when a second tumour appeared in the axilla of the same side; and it gradually increasing, the child died suddenly, and apparently not affected from the irritation of the tumour. This last part of the case I have from report only.

The tumour occupied the whole fore-arm, measuring eleven inches in circumference. It was laid open longitudinally, and appeared to consist of what is termed "cerebral substance," included within cells of various sizes, and passing through which were seen bands of cellular membrane. The bone at the middle of the tumour was denuded of its periosteum. The arteries, from the pressure of the diseased mass, were so far obliterated as to resist the injection, except in a *very small* portion of cutaneous substance.

2d August 1820.

Extract of a Letter from Dr DICKSON *to Dr* DUNCAN.

THE following suggestions, for which I am indebted to Mr Baynton, may be worthy of your notice.

In a late case of mortification of the lower extremity, in which opium and the various remedies usually employed had been resorted to without success, he surrounded the foot, from the toes to about three inches above the limits of the disease, (which had reached the ankle-joint,) with slips spread with diachylon plaster, without resin, making the pressure very moderate at first, and increasing it gradually on each application. The good effects of this measure in ar-

resting the progress of the disease,—in promoting the separation of the sphacelated from the living parts,—in improving the discharge, and abating the constitutional symptoms,—and, finally, in facilitating cicatrization to a considerable extent,—were, in the opinion of Mr Baynton, so conspicuous, as to induce him to believe, that, in a less unfavourable state of the patient's system, it would have been completely successful. But, on the occurrence of the hot weather, morbid action not only appeared in the same foot, but gangrene supervened in the sound limb, and in different parts of the body, and proved fatal.

Clifton, August 1820.

Observations on the Treatment of Gout. By A. Veitch, M. D.

From the frequent occurrence of gout in this neighbourhood, I have for some time paid more than ordinary attention to the treatment adopted in that disease; and having found such decided benefits from the use of local, as well as general blood-letting, but particularly the former, that I have been induced to give it publicity through the medium of your valuable Journal, that a trial of its effects may be more widely extended, and some of your more able correspondents induced more clearly to investigate the *modus operandi*, which, if it tend to a more perfect knowledge of this mysterious disease, my object will be attained. It is by no means my present intention to offer any remarks with a view to the illustration of any opinion I may entertain respecting the cause of this disease, though they may appear necessary, when so widely differing from the practice of the present day; but, as that would lead into a longer detail than what I purpose by the present communication, suffice it for me to state, that I have, like others of my professional brethren, tried, and seen tried in vain, so many and so various means, that I am doubtful whether the remedies have not often been worse than the disease itself; and it is no less painful to see men in all ranks of life swallowing the *ephemeral specifics* of the day, to the ultimate ruin of their constitutions, and substituting temporary cure for permanent mischief, without having it in our power to counteract the deleterious effects of these pernicious drugs. The following plan, however, has at least this advantage,—that we are aware of what is doing, and have it in our power to regulate the means according to the age, strength, and constitution of our patient. But, after every trial which I have made of it, no bad effects were ever produced, even in the most debilitated; on the contrary, it has never failed when properly administered; and I am every day more and more persuaded of its beneficial effects.

I am aware, that the profession are not to be told, that general, as well as local bleeding, has before been recommended, tried, and abandoned; but I am persuaded, it has been abandoned only in consequence of misapplication; and upon its proper application its success chiefly depends.

Leeches, from the nature of the disease, are perhaps the best local application; and it is my usual practice, as soon as the patient begins to feel a fit of gout coming on, and when its determination to a certain part is ascertained by the commencement of *pain* in that part, immediately to apply four or five leeches, never to, or upon, the part affected, though I have seen an attack in the knee entirely removed by the application of leeches to the foot. The greatest attention, however, is necessary, not to apply them after *inflammation* has commenced in the part. The presence of *pain only*, and *not* of *inflammation*, is the time when they ought to be applied; if this is not attended to, the paroxysm, in place of being diminished, will be increased. On the contrary, by paying strict attention to this, the paroxysm will altogether be prevented, as well as its recurrence, by a timely application, (if it should be found necessary by the return of pain.) Should, however, the swelling, pain, and also the *inflammation* have come on so rapidly, or there has been a delay of the application, we must wait till the *inflammation* has somewhat subsided before we can apply the leeches; after which, all the good effects will follow, and the hitherto suffering patient will, in half his usual time, regain the use of his legs and feet. In the event of the head, heart, lungs, or stomach, becoming affected, general, as well as topical bleeding, continued with blisters, and calomel purgatives, will prove equally efficacious. I could give many cases, both of old and young gouty subjects, who have found the most decided relief from this plan of treatment. In young persons, and those who have not had gout, were general, as well as topical, blood-letting, together with other antiphlogistic means, strictly adhered to, on its first commencement, they would have little cause to fear a second attack. An able and learned physician seems to have had similar ideas, when in his (Clarke's) Compendium Praxeos Medicinæ, he says: "An florente ætate, viribusque minime labefactis, prima morbi accessione, sanguinis missio?" And the old gouty patient will feel many of his sufferings alleviated by the timely application of this *local* method; and where the limbs have become stiff from repeated attacks of gout, and the formation of concretions on the joints: "An sarsaparillæ decoct. cum acido nitrico et hydrargyri preparationes ad salivæ fluxum lenem ciendum?"

Description of an Epidemic Fever at Surat, in which Venesection was employed with decided advantage. By THOMAS TOD MARDON, *Garrison Surgeon. Communicated to the Editor of the Bombay Courier.*

SOME circumstances attending a fever which was very prevalent, and threatened to be very fatal, in a detachment of the Bombay European Regiment doing duty at this station in the beginning of June, appearing to me to be interesting and instructive, as well in their apparent origin as their results, I have thought it my duty to give them publicity through the medium of your paper.

The transfer of the Dutch bunder to the commissioner having ren-

dered it necessary to provide other quarters for the European troops, a building formerly occupied as a mint, and subsequently as a barrack of the Artillery Lascars, was selected as the best the place afforded. It has, however, proved itself most improper for the purpose. Situated in a close crowded part of the town, it is merely a small square area, enclosed by a low wall, from which descends a slanting roof, and would thus be nothing but a shed, but for a matted frame-work inside, composing windows and doors, which, of course, all open to the centre of the square. It has only one entrance, and all the usual barrack offices of cook-room, guard-room, privy, married men's quarters, &c. were all included in the same area, separated from each other and from the men's apartments mostly by matted partitions.

The men were so crowded together, that their cots almost touched, and they had no room whatever to move about. In such a situation, to preserve cleanliness was very difficult, and ventilation impossible, and the causes which generate fever, whatever they may be, soon began to operate. In one month from the 22d of May, 53 men out of 94 (the whole number of the detachment) were attacked by fever; the leading symptoms of which were the following: great prostration of strength and irritability of stomach, acute headach, intensely hot skin, and a hard strong pulse, generally much above an hundred in a minute. During the attack, in most cases the lips and tongue were pallid, the gums transparent, contracted, and horny; the countenance, in some sunk and cadaverous, in others much flushed. In the intervals of attack, the tongue was invariably moist, clean, and red. Several cases were brought in in a state of stupor, from which they did not recover for 24 hours.

In the first four violent cases, I pursued the mode of treatment which former experience led me to believe most likely to be successful; the severity of the headach appeared to forbid the employment of emetics, but the bowels were purged by the most active cathartics, and every attempt was made to effect salivation by the most assiduous use of mercury, both internally and by friction. No amelioration whatever followed this mode of treatment, but as soon as the system became influenced by the mercury, a tendency to putrefaction showed itself in the excessive fetor of the breath, the head becoming swollen, the parotids indurated and enlarged, and the gums sphacelated. I have every reason to believe, in two instances, the œsophagus and stomach partook of the same condition. The four men all died, three of them nearly putrid.

Considering the mercurial treatment not merely to have failed, but, in these cases, to have accelerated death, it became my duty to adopt another, and that which I had the good fortune to pursue has been attended with the happiest consequences, only one man out of 49 having died since, and in him the symptoms evidently denoted effusion of the brain, which I believe to have proceeded to an incurable length previous to his admission in the hospital. These cases were quite as threatening as, or more so than, those which proved fatal,

and the disease may be said to have increased in violence until the men were removed to another situation.

The treatment alluded to was to bleed to the fullest extent the strength of the patient would admit of, as soon as the hot fit was fully formed; this never failed removing it in an hour or two; and then bark, with the sulphuric or nitric acid, was given as freely as circumstances would admit of. On the following day the bleeding was repeated if the urgency of the symptoms pointed out the necessity, and, in the interval, the bark and acid were given as before.

In some cases the bleeding was repeated four times, in others two or three, and in many the first bleeding was sufficient to arrest the disease. Calomel was only used as a purge before the bark was commenced, and then was always combined with scammony or some other active cathartic.

A liberal allowance of wine, with a light nutritive diet, was given throughout the disease.

Blisters were generally found necessary to the head and not unfrequently over the stomach; but the irritation of this viscus being considered symptomatic, never deterred me from the use of bark whenever the intermission was complete.

Spunging the body with cold water and vinegar, and effervescing saline draughts during the heat of fever, were in constant use as auxiliaries, but were not depended on as efficient parts of the course.

I have already stated, that, under this treatment, 48 men recovered, but I by no means intend to say, that the recovery was its simple and immediate consequence; on the contrary, many of those, the obstinacy of whose fever required repeated bleeding, were long in extreme danger, and required the most careful attention to conduct them to a state of convalescence; but these difficulties, and the modes adopted to counteract them, will readily occur to every intelligent practitioner.

The alarming symptoms of this fever ceased altogether in a week after the removal of the men into other quarters in the castle, but relapses are still so frequent since the commencement of the rains, as to make one-third of them constantly patients in the hospitals.

In the above recital I have purposely abstained from every attempt at theory; the facts, to which I have strictly confined myself, were witnessed throughout by Dr Meek, Superintending Surgeon, and Dr Lamb, Assistant-Surgeon, and to their advice and assistance I am happy to acknowledge myself much obliged.

Surat, July 14, 1818.

Establishment of a General Board of Health for Ireland.

The establishment of a General Board of Health is as interesting to the community at large, as it is to the medical profession. In its operation every one is deeply interested, and it may be productive of much inconvenience or of great advantage, accordingly as it is established upon just or false principles. Medical Police is in fact not so much a professional study, as a branch of the science of Political

Economy. Its object is the preservation of the general state of health, by obviating the general causes of disease. The state of Medical Police in the British empire and in Germany is strikingly contrasted, and in neither is it founded upon sound principles. Except our quarantine regulations, and the inefficient corporation privileges of the various branches of the profession, we have no permanent medical police, and local or occasional circumstances influence its application; while, in Germany, a mistaken policy of regulating every thing connected with health, has led to the formation of a cumbrous code of contradictory, and often hurtful enactments.

The philosophy of Medical Police does not differ from that of the other branches of Political Economy, and its objects are to be obtained by facilitating the acquisition and dissemination of the relative information, with as little enactment as possible, and no tendency to extend, or create, monopoly. We cannot therefore adequately express the satisfaction with which we have perused the first fruits of the General Medical Board established in Dublin, upon the soundest principles of political science.

The Board is of a mixed nature, neither consisting entirely of professional men, nor excluding them altogether. The lay members, if they may be so called, are not selected on account of their holding high official situations, which would interfere with their attending to its business, but from those individuals who have, by their past zeal in the service of the poor and the public during the late epidemic, given the strongest guarantee of their future exertions, and whose rank in society is sufficient to give them due effect. The professional members consist of the heads of the Medical Department, for reasons sufficiently obvious, and of some others distinguished by their zeal and activity.

It is not a little recommendation of this Board, that, except a bare remuneration to the Secretary for time and labour, it costs the public nothing. It may do much good; it cannot do any harm; for it has no control over the profession, it enjoys no patronage, nor possesses any exclusive rights. But its objects, and the means which it has devised for attaining them, cannot be so well explained as by reprinting the warrant of the Lord Lieutenant, the instructions furnished to the Board by our enlightened countryman, the present Secretary of the Irish Government, and the Queries circulated by the Board; and we trust that, ere long, similar Boards will be established both in Scotland and England, which they might be at no other expence than enabling them to conduct their correspondence free of expence. In the mean time, we shall feel gratified if the circulation of the queries should procure from our correspondents communications on the causes, progress, and decline, of epidemic disease in any part of the empire or its dependencies.

By the Lord Lieutenant General, and General Governor of Ireland,

TALBOT.

WHEREAS, it is deemed expedient, that a General Permanent

Board of Health should be formed in the city of Dublin, for the purpose of inquiring into the state of the public health, and of ascertaining the causes, which may, at any time, tend to injure or improve it—We do hereby nominate and appoint John David La Touche, Peter La Touche, William Disney, Robert Perceval, M. D., George Renney, M. D., Philip Crampton, Esqrs., Rev. James Horner, John Cheyne, M. D., Samuel Bewley, William Harding, Thomas Crosthwaite, John L. Maquay, Francis Barker, M. D., and Francis Lear, Esqrs. to be a Board of Health, for the above purposes accordingly.

Given at his Majesty's Castle of Dublin, the 27th day of March 1820, *by his Excellency's Command,* (Signed) C. GRANT.

Plan of Regulations for the Guidance of the Board of Health; as communicated to the Board by Mr Grant.

1st. To obtain the earliest information respecting the appearance of Epidemic disease, either of foreign or domestic origin; to trace it in its progress, and to ascertain the causes of its rise and diffusion.

2d. To collect information from intelligent individuals in every part of the kingdom, including Members of Parliament, the Clergy of different denominations, Magistrates, and Governors of Hospitals, and Dispensaries, on the actual condition of the Poor, and the circumstances which affect their health, as to locality, occupation, state of dwellings, supply of fuel, food, clothing, or education.

3d. To digest the information thus collected into a methodical form, so contrived, that, by contrasting the state of the poor in different districts. it shall afford a just estimate of the operative causes of diseases.

4th. To obtain authenticated reports on the measures used in other countries, to secure the public health, together with an account of their success, so that, if it shall be deemed expedient, similar measures may be adopted in this country.

5th. To procure statements from different parts of Ireland, on the means which have been lately resorted to, in order to obviate sickness, and to ascertain those causes which have principally contributed to success or failure.

6th. To inquire into the organization of hospitals intended for the relief of contagious disease, in order to adapt them to existing circumstances; and, as far as possible, to bring such institutions under a general system of improved regulation.

7th. To ascertain the places where dispensaries are established; how they are governed; how the medical duties are discharged, and what benefits the poor derive from them; and to acquire correct information as to the state and management of their funds.

8th. To be a medium of communication between charitable institutions for the prevention of sickness in different parts of the kingdom; to supply information, as to the best modes of conducting such establishments, so that each may avail itself of the expe-

rience of the rest, and be instructed as to the best and most direct modes of obtaining its object.

9th. To communicate information to Government on all the preceding topics; and to present a general report at stated periods, on the result of such inquiries.

10th. To submit, for the consideration of the Government, such measures of police, as are likely to improve the public health, and require the sanction of the executive government, or the support of positive law.

Queries proposed by the General Board of Health.

I. *Dwellings.*—1. Are the dwellings of the poorer classes so situated, in general, as to be not unfavourable to health? Is there much bog, or marsh strictly so called, in your neighbourhood?

2. Is the substratum, or rock of the country, limestone, slate, granite, or of what other material is it composed?

3. Does the custom prevail, of forming deposits of putrefying vegetable or animal matter near the dwellings of the inhabitants? Have means been employed with success for the prevention of such nuisances?

4. Do any facts evince the unwholesomeness of the effluvia proceeding from water in which flax has been steeped, contiguous to the habitations of the poor?

5. Of what materials are the cabins mostly constructed? Are they often built in part below the ground? What apertures have they for the admission of air and light? If provided with windows, are these so constructed, as to admit of being occasionally opened? Are the dwellings of the poor in general constructed with chimneys?

6. What improvements in the construction of their dwellings, conducive to dryness, ventilation, and light, are practicable? Are the poor disposed to adopt such improvements? Be so good as to describe the general internal state of their dwellings.

7. Are their cabins much crowded, particularly in the night time?

8. Do the inhabitants lie promiscuously; and are cattle sheltered in their dwellings?

9. What is the condition of the poor inhabitants as to bedding? Do they sleep on straw, heath, rushes, or dried leaves?

II. *Clothing.*—1. Of what materials does the clothing of the poor generally consist? Is much or any attention bestowed on its renewal or cleansing?

2. Can you adduce any facts in proof of the opinion, that disease is extended among the poor by infected clothing?

3. Are the habits of the lower classes in your neighbourhood cleanly? If not, what methods are most likely to introduce cleanliness? has any plan for this purpose been put in practice in your neighbourhood with success?

III. *Diet.*—1. Is the diet of the lower classes sufficient as to

quantity; and is it of good quality? Does it give origin to disease or further its progress?

2. Be so good as to state the price of Bread, Potatoes, Oatmeal, Milk, and Salt, generally in your neighbourhood, with the average price of each of these articles throughout the year.

3. Does fish form a considerable article of diet amongst the people? Are fisheries encouraged? Do any, and what obstructions exist to the further extension of the fisheries; and by what means are these obstructions likely to be removed?

IV. *Fuel.*—1. Is turf the only fuel in your neighbourhood, or is there any considerable and regular supply of coal?

2. Are the poor well supplied with fuel? Has the want of this article favoured the extension of disease?

3. In the mode of burning their fuel, are any changes practicable, likely to diminish its consumption and promote ventilation?

V. *Employment.*—1 What are the wages of labour in your neighbourhood? Is there sufficient employment for the poor? Can you propose any means of employment productive to the community or to individuals, suggested by the locality of your district?

2. How are females employed, and what are the daily benefits which may accrue to a family from such employment? State also the effects of different kinds of employment on the health of the poor.

VI. *Contagion.*—1. Do any customs, contributing to extend febrile or other infection, at present exist amongst the poor? If so, can these be opposed or counteracted with any probability of success?

2. Are mendicants numerous? Can you state any facts in proof of the communication of disease, by strolling or other beggars? Can you point out any causes which produce or promote mendicity?

3. Is fever now prevalent in your neighbourhood? If so, does it spread through families? State what has been the general prevalence of fever, within your memory, amongst the poor.

4. Are persons attacked with fever speedily removed to an hospital; and are measures employed to purify the clothing and bedding of such patients, or of their families? And if this is the case, be so good as to state particularly these or other preventive measures. Also, if any mode of cleansing the walls and furniture of infected houses has been resorted to with success.

5. Have the lower classes readily concurred in the measures of prevention which were generally recommended for adoption, during the progress of the late Epidemic Fever?

6. What means appear to you most likely to remove their prejudices, and to convince the sufferers, that cleanliness of all kinds, free admission of air and light to houses and cabins, warm and dry clothing, the avoiding excessive fatigue and night air, and the immediate separation of the sick from the healthy, during the prevalence of epidemic disease, are their best and surest preservatives from danger?

VII. *Endemic and General Diseases.*—1. Are any other diseases

prevalent in your vicinity, and from what causes do they chiefly originate?

2. Does the Small-pox often make its appearance? Does it prove fatal to a large proportion of those whom it seizes? Is Vaccine Inoculation generally and successfully practised?

3. Do any manufactures, peculiarly injurious to health, exist in your neighbourhood? How do they operate, and how are their bad effects to be remedied?

4. Are spirituous liquors consumed to excess by the middle and lower classes in your neighbourhood? To what extent is malt liquor in use amongst them? Do you think that the habit of intoxication gains ground amongst the poor? If you can devise any practicable means of checking so serious an evil, state them in detail.

5. Do any charitable Societies exist in your neighbourhood, for the relief of the poor during sickness, and for the encouragement of good and healthful habits? Can you suggest any mode of extending these societies, or rendering their operations more efficacious?

6. Please to supply any information which may not be connected with the foregoing Queries, but which you shall judge to be material in elucidating the origin and progress of such distresses of the Poor of Ireland as have a tendency to produce, to propagate, and to continue disease amongst them.—And point out any practicable measures, whether of a general or local nature, which, if duly enforced by Government, and by benevolent individuals or societies, may lay a foundation for the gradual improvement of their condition. This query is not meant to comprehend *Education*, because it must be allowed, that Schools for the religious and moral instruction of the lower orders of Ireland, extensively formed, and carefully superintended, should accompany every measure which may be devised for the permanent advantage of the country.

7. To conclude—As the people of any country can be effectually benefited only by their own exertions, the importance of such exertions ought to be impressed on their minds by every possible means. —Your opinion is therefore particularly requested as to the measures which have a tendency to excite and keep up such a laudable spirit amongst them, under the varying influence of favourable or adverse circumstances.

St George's Medical School.

The Lectures on the Laws of the Animal Economy and Practice of Physic, with Pathological Demonstrations; and the Lectures on Therapeutics with Materia Medica, by Dr Pearson;

The Lectures on Chemistry, by Professor Brande;

And the Gratuitous Lectures on Surgery of Sir Everard Home to the Pupils of St George's Hospital, will commence, as usual, the first week of October.

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